IronAge

a Chilton publication
Radnor, Pennsylvania 19089

Semi-Annual Index

July - December, 1972

Volume 210

Microfilm Copies

Complete microfilm copies of The IRON AGE, text and advertising, are available beginning with Vol. 161 (1948) through the issues covered in this index. For information write to University Microfilms, 313 N. First St., Ann Arbor, Mich.

Volume 210 • July - December, 1972

SEMI-ANNUAL INDEX IRON AGE

July - December, 1972 Volume 210

SUBJECT

A

ACF Industries, Inc.:
Caution Light Slows RR Recovery, by K. W. Bennett, Aug 3 p 58

AHMSA
See: Altos Hornos de Mexico

Abex Corp.:
Improvements in ACT Casting Method Extend its Use, Dec 14 p 27
The Precision Edge of Abrasive Cutting, by J. E. Sandford, Dec 14 p 62

Abrasives
Coated Abrasive Field Has New Nitty-Gritty, by R. A. Wilson, Sept 14 p 65
Diamond Wheel Grinds "Impossible" Drill Materials, July 27 p 57
The Finest Cutting You'll Ever See, Dec 7 p 85
The Precision Edge of Abrasive Cutting, by J. E. Sandford, Dec 14 p 62
Super Tools for Superalloys, by R. A. Wilson, Oct 19 p 96

Acme-Cleveland Corp.:
Acme-Cleveland Adds to European Penetration, July 6 p 26

Acoustics
See: NOISE

Admiral Corp.:
Appliances: Steel Tries to Brake Plastics Trend, by G. J. McManus, Aug 10 p 39

Advanced Devices Laboratory
It Takes Billions to Catch a Thief, by K. W. Bennett, Aug 17 p 38

Aerial Photography
Aerial Photo Lens Zooming in on Earthly Markets, by K. W. Bennett, Aug 31 p 24

Aerospace
Aerospace Precision Checks Servovalves for Industrial Use, Sept 21 p 58
Airfoil Design Provides High Lift, Low Drag, Nov 23 p 93
Alloy with a Memory Spurs Design, Oct 5 p 86
Apollo 17 to Manufacture Space Materials, Dec 7 p 31
Carbon Brakes to Get Trial on Concorde SST, July 27 p 27
Countdown Continues for Space Shuttle, Aug 10 p 51
Glass-Bead Peening Plates Powder on Metal Surfaces, Nov 30 p 23
Going for the Jugular in Mass Transit? by J. M. Beattie, July 27 p 41
Little Planes Lift Aero Market, by K. W. Bennett, Aug 31 p 25
Lockheed's Future Boosted by British TriStar Order, Aug 17 p 24
Space Age Welding Tackles Axle Housings, Nov 9 p 67
Stresskin Lightens the Supersonic Load, by J. E. Sandford, July 6 p 45
TRW: Trying to Plug Aerospace Know-How into Detroit Iron, by R. A. Guiles, Dec 21 p 22

Airco Industrial Gases Div.:
Tired Old Cupolas Rely on Oxygen for a Second Wind, Dec 21 p 52

Aircraft
China Trade: From Panda Pets to U.S. Jets? by K. A. Kaufman, July 13 p 27
Coating Extends Aluminum Potential, Sept 28 p 54
The Future Shock in Manufacturing, by J. E. Sandford, Aug 24 p 75
Japanese Airline Pushes Lockheed Toward Breakeven, Nov 9 p 29
Little Planes Lift Aero Market, by K. W. Bennett, Aug 31 p 25
Lockheed's Future Boosted by British TriStar Order, Aug 17 p 24
Stresskin Lightens the Supersonic Load, by J. E. Sandford, July 6 p 45

Airfoils
Airfoil Design Provides High Lift, Low Drag, Nov 23 p 93

Air Products & Chemicals, Inc.:
Flexible System Simplifies Annealing of Pipe Welds, Nov 2 p 54
Space Age Welding Tackles Axle Housings, Nov 9 p 67

Air Reduction Co., Inc.:
Tired Old Cupolas Rely on Oxygen for a Second Wind, Dec 21 p 52

Air Techniques, Inc.:
Air Transports Workpieces to Machinery, July 27 p 59

Akromold Inc.:
Custom-Cutting Creates Big Saw Market in U. S. Service Centers, by B. D. Wakefield, Oct 26 p 51

Alan Wood Steel Co.:
The Midi-Mill: It's a Different Ball Game, by G. J. McManus, Sept 7 p 95

Alcan Aluminum, Ltd.:
Aluminum Invades Steel's Market for High Pressure Tanks, by James Beizer, Nov 9 p 69
Aluminum Over-Capacity May Abort Price Hikes, by James Beizer, Dec 7 p 119

Alco Standard Corp.:
Making the Corporate Partner Concept Work, by J. M. Beattie, July 20 p 42
Politics: Strange Bedfellows Mate, by K. A. Kaufman, James Beizer, J. M. Beattie and G. J. McManus, July 20 p 33

All Nippon Airways
Japanese Airline Pushes Lockheed Toward Breakeven, Nov 9 p 29

Allegheny Ludlum Industries, Inc.:
Are Price Controls Out of Control? by G. J. McManus, Dec 14 p 48
Holding Companies are Losing their Grip, by G. J. McManus, Aug 3 p 56
Steel Hikes to be Scattered Throughout '73, by G. J. McManus, Sept 21 p 45
Steel Mills Get Out from Beneath Electrical Sheets, by G. J. McManus, July 6 p 30
What's Behind Freeze on Stainless Prices? by G. J. McManus, Sept 21 p 45
Who—If Anyone—Will Pay New Nickel Price? by G. J. McManus, Sept 14 p 53

Allen-Bradley Co.:
Computer's Cousins Make New Moves, by J. E. Sandford, Sept 21 p 49
Memory Chips Give Hardwired NC a Softwired Look, Sept 14 p 31
World Machine Tools: Service War? by R. A. Wilson, Aug 3 p 53

Allen Electric & Equipment Co.:
Grease Monkey: Auto Jungle's Dying Species, by R. A. Guiles, Sept 28 p 22

Salvador Allende
See: Chile

Alliance Tool International, Inc.:
U. S.-Soviet Trade: Penpals Without Any Pens? by R. A. Wilson, Nov 30 p 42

Allied Chemical Corp.:
Bumpers Reflect Bright '73 for Platers, by J. J. Obrzut, Dec 14 p 68

Allis Chalmers Mfg. Co.:
Bull Gear Flexing Won't Bully New Drive, by R. A. Wilson, Sept 7 p 101

Allison Div.:
Turbine Trucks: Gimmick or Godsend? by R. A. Guiles, Dec 14 p 52

Alloys
Alloy with a Memory Spurs Design, Oct 5 p 86
Bearing Steel Can Outperform Higher Alloys, Dec 21 p 51
Copper Alloy Gives a Damp, by T. C. DuMond, Nov 9 p 68
Exotic Alloys Come Back with Gas Turbines, by B. D. Wakefield, July 6 p 40
Gatorizing Brings Economy to Forging of Superalloys, July 13 p 84
PM Superalloys: Not Low Cost, But Cost Effective, Aug 31 p 16
Super Tools for Superalloys, by R. A. Wilson, Oct 19 p 96

Almay Research & Testing Corp.:
Vibration Couldn't Shake this Bolt Loose, by J. J. Obrzut, Sept 21 p 59

Alside, Inc.:
Metals Looks for a Home in Housing, by R. A. Wilson, Nov 9 p 56

Altos Hornos de Mexico
Mexico's Growth—Building Solidly, But Fast, by K. W. Bennett, Nov 23 p 69

Aluminum
Aluminum Has Trouble Making Prices Stick, by James Beizer, Nov 16 p 95
Aluminum in Autos: Sometimes You Add by Cutting-Weight, by R. A. Guiles, Nov 2 p 23
Aluminum Invades Steel's Market in High Pressure Tanks, by James Beizer, Nov 9 p 69
Aluminum: Only the Pricing is Still Sick, by James Beizer, Oct 26 p 40
Aluminum Over-Capacity May Abort Price Hikes, by James Beizer, Dec 7 p 119
Aluminum Seeks Markets to Match its Capacity, by James Beizer, Oct 19 p 85
Coating Extends Aluminum Potential, Sept 28 p 54
Fluxless Aluminum Soldering Heads for Production Line, by J. J. Obrzut, Dec 21 p 55
Has Amax Taken a Giant Step Toward New Smelter? by James Beizer, Sept 7 p 141
Plastic Metals Offer Flexibility in Tooling, Aug 17 p 52
Pricing is Big Worry for Aluminum Producers, by James Beizer, Nov 2 p 67
Shutdowns: One Company's Loss is Another's Gain, by G. J. McManus, Nov 23 p 61
Simple Test Checks Formability of Steels, Aluminum, Oct 19 p 27
Soviet Technology: Is this the Start of Something More? by James Beizer, Aug 31 p 45
Ultrasonics Rids Flux from the Soldering of Aluminum Tubing, Aug 31 p 35
Upslope Welding Frees Aluminum from Porosity, Nov 2 p 27

Aluminum Assn.:
Aluminum Industry's Convalescence Has Six Months to Go, by James Beizer, July 27 p 69
Aluminum: Only the Pricing is Still Sick, by James Beizer, Oct 26 p 40
Pricing is Big Worry for Aluminum Producers, by James Beizer, Nov 2 p 67

Aluminum Co. of America:
Aluminum: Only the Pricing is Still Sick, by James Beizer, Oct 26 p 40
Aluminum Seeks Markets to Match its Capacity, by James Beizer, Oct 19 p 85
Finding the Key to Board Interlocks, Dec 7 p 73
Fluxless Aluminum Soldering Heads for Production Line, by J. J. Obrzut, Dec 21 p 55
Taking Out an Insurance Policy for Bauxite Famine? by James Beizer, July 6 p 53
Ultrasonics Rids Flux from the Soldering of Aluminum Tubing, Aug 31 p 35
What's So Rare About a Rare-Earth Story? by James Beizer, Aug 10 p 40

Aluminum Industry
Aluminum Has Trouble Making Prices Stick, by James Beizer, Nov 16 p 95
Aluminum Industry's Convalescence Has Six Months to Go, by James Beizer, July 27 p 69
Aluminum: Only the Pricing is Still Sick, by James Beizer, Oct 26 p 40

Aluminum Over-Capacity May Abort Price Hikes, by James Beizer, Dec 7 p 119
Aluminum Seeks Markets to Match its Capacity, by James Beizer, Oct 19 p 85
Aluminum Statistics Rosy, But Next Year Smells Even Better, by James Beizer, Oct 5 p 123
Pricing is Big Worry for Aluminum Producers, by James Beizer, Nov 2 p 67
Shutdowns: One Company's Loss is Another's Gain, by G. J. McManus, Nov 23 p 61

AMAX Coal Corp.:
New Entries Enrich Coalgas Interest, by G. J. McManus, July 6 p 28

Amchem Products, Inc.:
Good Pretreatment Corrects Problems on Coating Line, Aug 3 p 74
No-Rinse Pretreatment Thwarts Pollution, Dec 7 p 90
Powder Coating: 'A Finisher's Finish', by J. J. Obrzut, Nov 16 p 67

American Bridge Div.:
Furnace Economics Expand Mini-Mills, by G. J. McManus, and K. W. Bennett, Dec 14 p 50

American Can Co.:
Manufacturers Up Output with Less Workers, by G. J. McManus, Sept 14 p 52

American Chain Assn.:
'Regional' Foreign Dumping Will be One Target of New Bill, by K. A. Kaufman, Nov 23 p 25

American Chain and Cable Co.:
Shutdowns: One Company's Loss is Another's Gain, by G. J. McManus, Nov 23 p 61

American Chemical Society
Solvent-Free Coatings are Cured by Ultraviolet, Sept 7 p 27

American Diecasting Institute
Diecasting Equipment Orders Begin to Boom, by K. W. Bennett, Oct 26 p 37

American Electric Power Service Corp.:
Energy Crisis: The Big Turn Off by J. M. Beattie, Dec 7 p 70

American Electroplaters Society
Bumpers Reflect Bright '73 for Platers, by J. J. Obrzut, Dec 14 p 68

American Federation of Labor/CIO
Labor Splinter Groups: A Thorn in Meany's Side? Sept 7 p 21
Meany, McGovern and the Time for Decision, by C. J. Suchocki, July 20 p 17
Meany-Nixon: Next White House Marriage? Nov 16 p 17
Meany's Polity: A Curse on Both Your Houses, July 27 p 19
McGovern Woos Labor Support with Rigged Base-Wage Voting, by K. A. Kaufman, July 27 p 43

American Hoist and Derrick Co.:
Recovery, Overseas Lift Crane Orders, by K. W. Bennett, Oct 26 p 39

American Institute of Metallurgical Engineers
Continuous Steelmaking Turns a Corner, by G. J. McManus, July 20 p 51

American Iron and Steel Institute
Metric System Millimetres its Way to Adoption, by J. J. Obrzut, July 13 p 72

American Magnesium Co.:
Magnesium: There's Action in Them Thar Hills, by R. R. Irving, Nov 9 p 64

American Metal Climax, Inc.:
Anaconda Puts Its Financial House Back in Order, by James Beizer, Aug 10 p 67
Has Amax Taken a Giant Step Toward a New Smelter? by James Beizer, Sept 7 p 141
Olin Pegs Nonferrous Growth in '73 to Economy, by James Beizer, Dec 21 p 59

American Mining Congress
Does This Surprise You? Should It? by Gene Beaudet, Oct 19 p 5
Ecology in Early Planning Necessary, Says Congressman, by James Beizer, Sept 28 p 63
Red-Minerals Goal: A Five-Fold, 30-Year Plan, by James Beizer, Sept 21 p 80

American Motors Corp.:
AMC Hatches a Back and a Bumper for '73, by R. A. Wilson, Aug 10 p 25
And Then There Were Three—Bus Builders, That Is, by R. A. Guiles, Nov 23 p 27
Automaker Fights Pollution Via Computer, Aug 3 p 76
Can Detroit's Wand Turn Federal Safety Beast into a Beauty? by R. A. Guiles, Nov 9 p 27
How Much Will Auto Prices Go Up? by D. N. Williams, July 13 p 65
New Bumpers Bounce Back, Comes on Strong, by R. A. Guiles, Sept 21 p 23

American Petroleum Institute
Will Pipe Hit Gusher from Renewed Oil-Field Activity? by G. J. McManus, Sept 21 p 48

American Pullmax Co., Inc.:
Punch Press Builders Go All the Way with NC, by B. D. Wakefield, Nov 23 p 87

American Rivet Co., Inc.:
Nonmetallic Coating Shows Promise for Cold-Heading Wire, July 27 p 59

American Smelting & Refining Co.:
Another Zinc Smelter Bites Emission Dust, by James Beizer, Aug 24 p 117
Bumpers Reflect Bright '73 for Platers, by J. J. Obrzut, Dec 14 p 68
Mining Congress Buries Optimism, by James Beizer, Sept 21 p 50
Slowly Nonferrous Earnings Log Gains, by James Beizer, Aug 10 p 46
Up the Down Stairs Again for Lead and Brass Prices, by James Beizer, Sept 7 p 90

American Society for Metals
'72 Metal Show Dazzles Cleveland, Oct 5 p 88

American Society of Mechanical Engineers
Automation: Spreading Technology Too Thin? by J. E. Sandford, Dec 7 p 69
Energy Crisis: The Big Turn Off? by J. M. Beattie, Dec 7 p 70
Metric System Millimetres its Way to Adoption, by J. J. Obrzut, July 13 p 72
Vertical Welding Goes into Orbit by R. R. Irving, Oct 26 p 50

American Welding Society
Lasers Challenge Electron Beam Welding in Speed, Quality, by B. D. Wakefield, Dec 7 p 88

Anaconda American Brass Co.:
Up the Down Stairs Again for Lead and Brass Prices, by James Beizer, Sept 7 p 90

Anaconda Co.:
Anaconda Puts its Financial House Back in Order, by James Beizer, Aug 10 p 67
Chilean Tribunal—Hardly a Cent for Kennecott, Anaconda, by James Beizer, Aug 24 p 70
Copper in '73—Supply, Demand and Price Trends, by James Beizer, Oct 19 p 131
Court Slaps EPA and Lets Smelters Off Pollution Hook, by James Beizer, Dec 14 p 83
Don't Make Us Depend on Foreign Ores, Place Urges, by James Beizer, July 20 p 67
Government Deals Copper Companies Dual Blow, by James Beizer, Sept 28 p 63
Mining Congress Buries Optimism, by James Beizer, Sept 21 p 50
Politics: Strange Bedfellows Mate, by K. A. Kaufman, James Beizer, J. M. Beattie and G. J. McManus, July 20 p 33

Annealing
Flexible System Simplifies Annealing of Pipe Welds, Nov 2 p 54

Appliances
Appliances: Steel Tries to Brake Plastics Trend, by G. J. McManus Aug 10 p 39

Argonne National Laboratory
Diffusion Bonding Joins Titanium for Atom Smasher, Oct 26 p 53

Argus Research Corp.:
Steel Earnings: The Only Way to Go is Up, by G. J. McManus, Aug 3 p 55

Armco Steel Corp.:
Armco Dismantles Openhearths, Yet Buys Ingots, Oct 19 p 129
Clean Up at Armco and J&L Tagged "Unique" and "Biggest", Nov 30 p 21
The Fickle Future of Pickle Liquor? by G. J. McManus, Oct 19 p 83
Metals Builders Build a Boom, by K. W. Bennett, Aug 24 p 65
New Stainless Strong, Resistant to SCC, July 13 p 33
Steel Earnings: The Only Way to Go is Up, by G. J. McManus, Aug 3 p 55
Steel Mills Get Out from Beneath Electrical Sheets, by G. J. McManus, July 6 p 30

Armsted Industries, Inc.:
Caution Light Slows RR Recovery, by K. W. Bennett, Aug 3 p 58

Arrow Group Industries
Metals Builders Build a Boom, by K. W. Bennett, Aug 24 p 65

Arrowsmith Tool and Mfg. Co.:
Skills Attrition Stifles T&D Shop Revival, by R. A. Wilson, Sept 28 p 36

Artic Enterprises, Inc.:
When Wankel Puts it All Together—Watch Out, by D. N. Williams, Aug 3 p 61

Arwood Corp.:
Investment Casters Pour New Gains, Nov 23 p 65

Asea, Inc.:
Furnace Economics Expand Mini-Mills, by G. J. McManus and K. W. Bennett, Dec 14 p 50

Atlas Cycle Industries Ltd.:
Machine Tool Exports from India Inch Up but Bicycles Boom, Oct 26 p 23

Atlas Fabricators, Inc.:
'Do it Yourself' Russian Trade, by D. N. Williams, July 6 p 27

Atomic Energy Commission
Energy Crisis: The Big Turn Off? by J. M. Beattie, Dec 7 p 70

Austin-Hastings Co.:
Punch Press Builders Go All the Way with NC, by B. D. Wakefield, Nov 23 p 87

Australia
Has Amax Taken a Giant Step Toward New Smelter? by James Beizer, Sept 7 p 141
Nonferrous: All Nations are Not So Chile, by James Beizer, Oct 5 p 72

Auto Arc Div.:
Automatic Welding: Try It, You'll Like It, by B. D. Wakefield, Dec 14 p 66

Automation
American Robots May Invade Soviet Union—Via Japan, Nov 23 p 29
Automation: Spreading Technology Too Thin? by J. E. Sandford, Dec 7 p 69
DNC Lines Link Cutting to New Future, by J. E. Sandford, Oct 26 p 46
Flying Fingers Package 18,000 Parts per Hour, Oct 12 p 33
The Future Shock in Manufacturing, by J. E. Sandford, Aug 24 p 75

Automobile Mechanics
Grease Monkey: Auto Jungle's Dying Species, by R. A. Guiles, Sept 28 p 22

Automobiles
AMC Hatches a Back and a Bumper for '73, by R. A. Wilson, Aug 10 p 25
Aluminum in Autos: Sometimes You Add by Cutting-Weight, by R. A. Guiles, Nov 2 p 23
Auto Emission Uses Will Make Platinum Even More Precious, by James Beizer, Nov 23 p 115
Auto Emissions: Are Converters Coming for '75? by R. A. Guiles, Oct 5 p 68
Automaker Fights Pollution Via Computer, Aug 3 p 76
Automakers Boost Fourth Quarter Output as Sales Jump, by R. A. Guiles, Oct 19 p 25
Can Detroit's Wand Turn Federal Safety Beast into a Beauty? by R. A. Guiles, Nov 9 p 27
Detroit Escalates Weight War: Plastic Seems Main Weapon, by R. A. Guiles, Oct 26 p 21
Drive Trains Warm to Cold-Forming, by R. A. Wilson, Aug 17 p 36
Emissions: Well, Somebody Thinks They've an Answer, by R. A. Guiles, Oct 12 p 27
Everyone Talks of Emission Testing—New Jersey Does It, by D. N. Williams, July 20 p 21
Federal Auto Repair Centers are Planned, by R. A. Guiles, Oct 19 p 25
Ford Engine Flunks EPA Emission Test, Will Try, Try Again, Oct 5 p 25
Ford Mulls Honda Tie-Up, Eyes New "Clean" Engine, Nov 9 p 29
Ford Will Build in Taiwan—Speculation Now Shifts to Spain, Dec 7 p 27
GM Trial Balloon: Will Safety Sell Cars Now? by R. A. Wilson, Sept 14 p 27
Gases Check Weld Soundness of Auto Parts, Nov 2 p 53
Grease Monkey: Auto Jungle's Dying Species, by R. A. Guiles, Sept 28 p 22
Highway Safety: Where are You Now that We Need You? by R. A. Guiles, Nov 30 p 20
How Much Will Auto Prices Go Up? by D. N. Williams, July 13 p 65
If Auto Sales Pace Economy—We're Home Free, by D. N. Williams, July 13 p 65

Laser Light Maps Complex Auto Surfaces, Nov 23 p 94
Mobile Lab Puts Pollution Control on Wheels, Aug 3 p 27
Nader Blasts Away at His First Hate—the Corvair, by D. N. Williams, July 27 p 23
New Process Plates Composite Coating on Auto Parts, by W. G. Patton, Aug 17 p 50
Plastics Will Not Steel the Show in 1973 Models, by R. A. Wilson, Aug 24 p 25
Safety Bumps Up High-Strength Steel Stock, by R. A. Guiles, Nov 16 p 20
TRW: Trying to Plug Aerospace Know-How into Detroit Iron, by R. A. Guiles, Dec 21 p 21
UAW Scales Olympian Heights in Car-Pricing, Sept 21 p 19
Vega is Cinch to Win 'Recall of the Year' Award, by D. N. Williams, July 13 p 29
Who Pays for Recall Defect Repair? VW Case May Decide, by R. A. Guiles, Dec 7 p 25

Automotive Industry—Weekly Reports of Inside and Outside Influences (See Also R. A. Guiles and D. N. Williams)

Automotive Industry
Automakers Boost Quarter Output as Sales Jump, by R. A. Guiles, Oct 19 p 25
Can Detroit's Wand Turn Federal Safety Beast into a Beauty? by R. A. Guiles, Nov 9 p 27
Control Blitz Keys on Prices, Not Wages, by K. A. Kaufman, Aug 24 p 67
Detroit Finds New Economies in Gearmaking, by W. G. Patton, Sept 21 p 55
Detroit's Auto-Parts Diet Struggles, by R. A. Guiles, Oct 19 p 79
How Much Will Auto Prices Go Up? by D. N. Williams, July 13 p 65
If Auto Sales Pace Economy—We're Home Free, by D. N. Williams, July 13 p 65
TRW: Trying to Plug Aerospace Know-How into Detroit Iron, by R. A. Guiles, Dec 21 p 21
Woodcock Wracks Automakers Over Profiteering, Oct 19 p 5

Automotive Plating, Inc.:
Machining's Exotic Sleeper Comes on Strong, by K. W. Bennett, Sept 7 p 87

Avco Corp.:
Farm Machinery Set to Reap a Big '73, by K. W. Bennett, Nov 16 p 58
Little Planes Lift Aero Market, by K. W. Bennett, Aug 31 p 25

Avco-Lycoming Div.:
Little Planes Lift Aero Market, by K. W. Bennett, Aug 31 p 25

Avesta Jarnwerks, AB (Sweden)
Russian ESR Goes on Stream in Sweden, by P. J. Mullins, Dec 7 p 87
Will Industry Demand ESR Quality in Carbon Steels? by R. R. Irving, Aug 3 p 69

Avnet, Inc.:
Diecasting Equipment Orders Begin to Boom, by K. W. Bennett, Oct 26 p 37

Avondale Shipyards, Inc.:
Shipyards Sink Funds into Equipment Markets, by B. D. Wakefield, Nov 9 p 54

Axle Housings
Space Age Welding Tackles Axle Housings, Nov 9 p 67

B

Babcock & Wilcox Co.:
Nuclear Safety: The Only Fallout is $40 Million, by C. J. Suchocki, July 27 p 25
Race to Stifle SO_2 Offers $10 Billion Purse, by K. W. Bennett, Oct 19 p 80

Baldwin-Lima-Hamilton Corp.:
Holding Companies are Losing their Grip, by G. J. McManus, Aug 3 p 56

Bangor-Punta Operations, Inc.:
Automakers' New Sales Road—Rec Vehicles, by R. A. Guiles, Sept 28 p 42

Bars & Shapes
Stainless Bars Put to Screw Machine Test, by B. D. Wakefield, Nov 23 p 90

Basic Oxygen Process
Steel Summary: L-D Output Grows, Except in U.S., Nov 2 p 65

Bath Iron Works Corp.:
The Ship Comes in for Shipbuilders, July 13 p 95

Battelle Memorial Institute
Canada's LNG Line is No Pipe Dream, Oct 12 p 53
Gas-Fired Melting Cleans Up Foundries, Oct 26 p 53
Magnesium: There's Action in Them Thar Hills, by R. R. Irving, Nov 9 p 64

Carl Bauer Co.: (Germany)
Vibration Couldn't Shake this Bolt Loose, by J. J. Obrzut, Sept 21 p 59

Bausch & Lomb, Inc.:
New Coatings Will Absorb Heat, Reflect Light, July 20 p 25

Bauxite
Taking Out an Insurance Policy for Bauxite Famine? by James Beizer, July 6 p 53

Bay States Abrasives Div.:
The Precise Edge of Abrasive Cutting, by J. E. Sandford, Dec 14 p 62

John Bean Div.:
Farm Machinery Set to Reap a Big '73, by K. W. Bennett, Nov 16 p 58

Bearings
Bearing Steel Can Outperform Higher Alloys, Dec 21 p 51

Bechtel Corp.:
Are Price Controls Out of Control? by G. J. McManus, Dec 14 p 48
Mining Congress Buries Optimism, by James Beizer, Sept 21 p 50
New Entries Enrich Coalgas Interest, by G. J. McManus, July 6 p 28

Behrens Turret Punch Press Div.:
Punch Press Builders Go All the Way with NC, by B. D. Wakefield, Nov 23 p 87

Bell Telephone Laboratories
What's So Rare About a Rare-Earth Story? by James Beizer, Aug 10 p 40

Bellows-Valvair Div.:
Foreign Fluid Power Powers Up, by K. W. Bennett, Nov 23 p 66

Bending
Bending Roll Forms 14-In. Steel Plate, Sept 14 p 64
Extrusion Bending is a No-Scrap Operation, by R. A. Wilson, Aug 31 p 38

Bendix Corp.:
Aerial Photo Lens Zooming in on Earthly Markets, by K. W. Bennett, Aug 31 p 24
Factory Profit Levels: Easy to Gage and Improve, by K. W. Bennett, Oct 26 p 42
MT Show: The Global Scent of Fresh Sales Blood, by K. W. Bennett, Sept 14 p 49

Bennett & Kahnweiler, Inc.:
Bargain Plant Leases Disappear, by K. W. Bennett, July 13 p 66

Bertsch & Co.:
Bending Roll Forms 14-In. Steel Plate, Sept 14 p 64

Bethelehem Steel Corp.:
Bethlehem Buys New Clean-Up Gear with Bonds, Sept 7 p 17
Companies Jointly Sponsor Coke Pellet Pilot Plant, Sept 21 p 60
Furnace Economics Expand Mini-Mills, by G. J. McManus and K. W. Bennett, Dec 14 p 50
Products Liability: Now it's Let the Seller Beware, by J. M. Beattie, Oct 12 p 47
Profit Picture Pleased as Punch, by J. M. Beattie, Nov 2 p 42
The Ship Comes in for Shipbuilders, July 13 p 95
Ship Hull Section Takes Two Hours to Build, Sept 14 p 68
Shipyards Sink Funds into Equipment Markets, by B. D. Wakefield, Nov 9 p 54
Steel Earnings: The Only Way to Go is Up, by G. J. McManus, Aug 3 p 55
Steel Summary: Consumers Strong, Industrials Gain, Oct 5 p 121
Steel Summary: Market Regains its Strength, Oct 26 p 67
Steel Summary: Price Hikes and Profits Problems, Dec 7 p 117
Steel Summary: A Price Increase for Every Reason, Nov 30 p 65
Steel Summary: Rising Demand, Costs Don't Buoy Prices, Nov 9 p 85
Steelmakers Pin Hopes on Formed Coke, by G. J. McManus, Nov 2 p 52

Bicycles
Machine Tool Exports from India Inch Up but Bicycles Boom, Oct 26 p 23

Matthey Bishop, Inc.:
Auto Emission Uses Will Make Platinum Even More Precious, by James Beizer, Nov 23 p 115

Blanks
Advanced Ceramics Solve Special Problems, by A. M. Greene, Nov 9 p 70
Automakers Bank on Blanks to Cut Scrapage, by G. J. McManus, Aug 24 p 71
Blanking System Parlays Speed with Precision, Aug 31 p 37

Blaw-Knox Co.:
Continuous Cold Rolling is Now One Step Closer, by G. J. McManus, Sept 21 p 60
Need a Plant? Better Get Going, by G. J. McManus, Oct 5 p 72

Bodine Corp.:
Bodine Gets on Line with In-Line Assembly, by C. J. Suchocki, Oct 26 p 38

Boeing Co.:
Going for the Jugular in Mass Transit? by J. M. Beattie, July 27 p 41
Pollution Control: It's Now a Package Deal, by K. W. Bennett, Nov 9 p 60

Books—Reviews of books relating to Ferrous and Nonferrous Industries, Management, Materials and Engineering

Borazon
The Precise Edge of Abrasive Cutting, by J. E. Sandford, Dec 14 p 62

Fred J. Borch
Lower the Barriers at Home and Abroad, by Gene Beaudet and G. J. McManus, July 13 p 72

Borg-Warner Corp.:
Borg-Warner's Transmissions Shot from Guns, by R. A. Guiles, Nov 7 p 25

Brakes
Carbon Brakes to Get Trial on Concorde SST, July 27 p 27

Branson Sonic Power Co.:
Fluxless Aluminum Soldering Heads for Production Line, by J. J. Obrzut, Dec 21 p 55

Brass
Up the Down Stairs Again for Lead and Brass Prices, by James Beizer, Sept 7 p 90

Braun Engineering Co.:
Detroit Finds New Economies in Gearmaking, by W. G. Patton, Sept 21 p 55
Parts "Born-to-Shape" for Economy, by T. C. DuMond, Oct 5 p 79

Brazil
Brazil's Billion-Dollar Steel Baby, by G. J. McManus, Nov 2 p 44

British Aircraft Corp., Ltd.:
The Future Shock in Manufacturing, by J. E. Sandford, Aug 24 p 75

British European Airway
Lockheed's Future Boosted by British TriStar Order, Aug 17 p 24

British Steel Corp.:
Britain's Controls Inject Some Pep—and Some Concern, Nov 23 p 29
World Steelmen Fret About Overcapacity Ulcer, by Gene Beaudet, Oct 19 p 77

Brooks International Corp.:
Make Consultants Give You Results—Not Big Studies, Oct 5 p 75

Brown & Sharpe Mfg. Co.:
Foreign Fluid Power Powers Up, by K. W. Bennett, Nov 23 p 66
Machine Tools: Getting Ready for More Show (Biz), by R. A. Wilson, Aug 31 p 26
Tool Show's Second Week Draws Fat Wallets, by K. W. Bennett, Sept 21 p 47
Wankel Machine Tools Up and Running, But Where? by R. A. Wilson, Aug 31 p 15

David Brown Tractors, Ltd.:
Farm Equipment: The Lush Years Return, by K. W. Bennett, July 27 p 44

Buckbee Mears Co.:
Chemical Milling Grabs New Lease on Life, by K. W. Bennett, Oct 12 p 41

Budd Co.:
Going for the Jugular in Mass Transit? by J. M. Beattie, July 27 p 41

How to Manage People Problems, by J. M. Beattie, Sept 14 p 57
Profit Picture: Pleased as Punch, by J. M. Beattie, Nov 2 p 42
Shutdowns: One Company's Loss is Another's Gain, by G. J. McManus, Nov 23 p 61

Buick Div.:
Detroit Finds New Economies in Gearmaking, by W. G. Patton, Sept 21 p 55
Gases Check Weld Soundness of Auto Parts, Nov 2 p 53

Building Construction
Bargain Plant Leases Disappear, by K. W. Bennett, July 13 p 66
Building Material Prices: New Ball Game, by G. J. McManus, Nov 23 p 67
Building Trades: Roundtable Planes Some Rough Edges, Oct 12 p 23
Foamed Resins Vie for Sheet Metal Jobs, Nov 30 p 58
Metals Builders Build a Boom, by K. W. Bennett, Aug 24 p 65
Metals Looks for a Home in Housing, by R. A. Wilson, Nov 9 p 56
Mobile Homes: Tomorrow's Recession-Proof Market? by K. W. Bennett, July 6 p 25
Need a Plant? Better Get Going, by G. J. McManus, Oct 5 p 72

Bullard Corp.:
MT Show: The Global Scent of Fresh Sales Blood, by K. W. Bennett, Sept 14 p 49

Bumpers
Bumpers Reflect Bright '73 for Platers, by J. J. Obrzut, Dec 14 p 68
Can Detroit's Wand Turn Federal Safety Beast into a Beauty? by R. A. Guiles, Nov 9 p 27
Detroit Escalates Weight War: Plastic Seems Main Weapon, by R. A. Guiles, Oct 26 p 21
Federal Auto Repair Centers are Planned, by R. A. Guiles, Oct 19 p 25
New Bumpers Bounce Back, Come on Strong, by R. A. Guiles, Sept 21 p 23
Safety Bumps Up High-Strength Steel Stock, by R. A. Guiles, Nov 16 p 20

Bunker Hill Co.:
Bull Gear Flexing Won't Bully New Drive, by R. A. Wilson, Sept 7 p 101

Bunting Co.:
Powder Coating: 'A Finisher's Finish', by J. J. Obrzut, Nov 16 p 67

Burgmaster Corp.:
Delivery Stretch May Squeeze MT Builders, by R. A. Wilson, Nov 2 p 41
World Machine Tools: Service War? by R. A. Wilson, Aug 3 p 53

Burners
Compact Burner Churns Out Heat Fast, by J. J. Obrzut, Nov 23 p 91

Business/Finance Newsfront, Weekly Editorials and Forecasts (See also Gene Beaudet)

Business International Corp.:
Exporter Memo: Dump Before the Phantom Strikes, by C. J. Suchocki, July 13 p 31

Busses
And Then There Were Three—Bus Builders, That Is, by R. A. Guiles, Nov 23 p 27
Hey You, the Computer Says Your Bus is Here, by D. N. Williams, July 6 p 20

Busy Beaver Building Centers
Building Material Prices: New Ball Game, by G. J. McManus, Nov 23 p 67

Butler Mfg. Co.:
Metals Builders Build a Boom, by K. W. Bennett, Aug 24 p 65

C

CF&I Corp.:
The Midi-Mill: It's a Different Ball Game, by G. J. McManus, Sept 7 p 95

Cabot Corp.:
Exotic Alloys Come Back with Gas Turbines, by B. D. Wakefield, July 6 p 40
Parts "Born-to-Shape" for Economy, by T. C. DuMond, Oct 5 p 79

Calgon Corp.:
Pollution Control: It's Now a Package Deal, by K. W. Bennett, Nov 9 p 60

Cameron Iron Works, Inc.:
U. S.-Soviet Trade: Penpals Without Any Pens? by R. A. Wilson, Nov 30 p 42

Canada
Canada Plans Mill for Arctic Pipeline, Aug 10 p 55
Canada's LGN Line is No Pipe Dream, Oct 12 p 53
Canadian Labor Settlement: Not Only Nickels and Dimes, by J. M. Beattie, July 13 p 97
Canadian MT Orders Score 31 Pct Gain in First Half, Sept 14 p 29
New Nickel Capacity in Oversupply Period? by James Beizer, July 27 p 49
Will U. S. Mills Swallow SIP? Nov 23 p 63

Canadian Machine Tool Distributors Assn.:
Canadian MT Orders Score 31 Pct Gain in First Half, Sept 14 p 29

C. I. Capps Co.:
At the Casters, When it Rains Orders it Pours, by K. W. Bennett, Nov 30 p 39

Carbides
The Finest Cutting You'll Ever See, Dec 7 p 85
PWM: New Tiger in Cutting Tools, by R. A. Wilson, July 13 p 69

Carbidex Corp.:
Stamping Flaws Easily Spotted on TV Screens, July 6 p 21

Carborundum Co.:
Carbon Brakes to Get Trial on Concorde SST, July 27 p 27

Carburizing
Vacuum Draws Down Carburizing Time, by T. C. DuMond, Sept 7 p 100

Carey Machinery & Supply Co., Inc.:
OSHA May Certify Private Labs to OK Equipment, by R. A. Guiles, Sept 21 p 25

Carnegie-Mellon University
The Future Shock in Manufacturing, by J. E. Sandford, Aug 24 p 75

Carnes Co.:
Good Pretreatment Corrects Problems on Coating Line, Aug 3 p 74

Carolina Steel Corp.:
Ecological Hangups Erode Heavy Steel's Market, by G. J. McManus, Aug 17 p 34

J. I. Case Co.:
Farm Equipment: The Lush Years Return, by K. W. Bennett, July 27 p 44
Farm Machinery Set to Reap a Big '73, by K. W. Bennett, Nov 16 p 58

Casting, Continuous
Continuous Casting Needs Solid Instrumentation Support, Oct 12 p 56
The Midi-Mill: It's a Different Ball Game, by G. J. McManus, Sept 7 p 95
Slab Casters Turn it On at McLouth Steel, by G. J. McManus, Nov 30 p 51

Castings
At the Casters, When it Rains Orders it Pours, by K. W. Bennett, Nov 30 p 39
Cast-to-Shape Parts Require 50 Pct Less Secondary Machining, by B. D. Wakefield, Oct 5 p 85
Foundries Heat Up for Demand Push, by R. A. Wilson, Oct 5 p 65
Improvements in ACT Casting Method Extend its Use, Dec 14 p 27
Thin-Wall Castings Offer Hairline Accuracy, by Raymond Shah, Oct 5 p 84

Castings, Die
Die Casting and Solid State Controls Mix, by B. D. Wakefield, Nov 2 p 56
Die Casting Equipment Orders Begin to Boom, by K. W. Bennett, Oct 26 p 37
Die Casting Variables Controlled by Computer, Oct 26 p 25
Future Gleams for Copper Die Castings, by T. C. DuMond, Dec 21 p 50
In '68—Anyone for Ferrous Diecasting? Now There Is, by R. A. Wilson, July 27 p 46
Magnesium: There's Action in Them Thar Hills, by R. R. Irving, Nov 9 p 64
Sealing Method Expands Usage of PM, Die Cast Parts, Nov 30 p 57

Castings, Investment
Investment Casters Pour New Gains, Nov 23 p 65

A. M. Castle Co.:
Custom-Cutting Creates Big Saw Market in U.S. Service Centers, by B. D. Wakefield, Oct 26 p 51

Caterpillar Tractor Co.:
Getting Lathes Turning with the Super Tool, by R. A. Wilson, July 20 p 47
Metric System Millimetres its Way to Adoption, by J. J. Obrzut, July 13 p 72
Tool Show's Second Week Draws Fat Wallets, by K. W. Bennett, Sept 21 p 47
Towmotor Follows the Track of the Cat, by R. A. Wilson, Dec 14 p 67
U. S.-Soviet Trade: Penpals Without Any Pens? by R. A. Wilson, Nov 30 p 42
VIP Soviet Trade Bait Draws Early Bites, by K. A. Kaufman and G. J. McManus, Oct 26 p 34
With Profits Elusive, Republic Steel Says "Nuts" to Bolts, by R. A. Wilson, Nov 16 p 61

Catholic University (Belgium)
The Future Shock in Manufacturing, by J. E. Sandford, Aug 24 p 75

Celanese Corp.:
Large-Diameter Plastic Pipe Extruded on Site, Nov 23 p 31

Ceramics
Advanced Ceramics Solve Special Problems, by A. M. Greene, Nov 9 p 70
Ceramic Coating System Controls Heat Flow, Sept 14 p 66

Cerro Corp.:
Chile and Kennecott Both Claim Victory but Cerro Gets Paid, by James Beizer, Dec 7 p 71
Chilean Tribunal—Hardly a Cent for Kennecott, Anaconda, by James Beizer, Aug 24 p 70

Certain-teed Products Corp.:
Success in R&D Without Deficit Spending, by P. J. Cathey, Nov 30 p 43

Champion Home Builders, Inc.:
Mobile Homes: Tomorrow's Recession-Proof Market? by K. W. Bennett, July 6 p 25

Charles Beck Machine Corp.:
Metric System Millimetres its Way to Adoption, by J. J. Obrzut, July 13 p 72

Chase Manhattan Bank
Loans: Cheap Money Costs More, by K. A. Kaufman, Sept 7 p 85
MT Show: The Global Scent of Fresh Sales Blood, by K. W. Bennett, Sept 14 p 49
Machine Tools Future: The Computer Grows Up, by J. M. Beattie, Nov 30 p 44

Chemcut Corp.:
Chemical Milling Grabs New Lease on Life, by K. W. Bennett, Oct 12 p 41

Chemical Construction Co. of New York
Race to Stifle SO_2 Offers $10 Billion Purse, by K. W. Bennett, Oct 19 p 80

Chemical Milling
Chemical Milling Grabs New Lease on Life, by K. W. Bennett, Oct 12 p 41

Chicago Blower Corp.:
Burning Wastes Test Mettle of Materials, by T. C. DuMond, Aug 10 p 52

Chicago Bridge & Iron Co.:
Ecological Hangups Erode Heavy Steel's Market, by G. J. McManus, Aug 17 p 34

Chile
Allende Fixes Blames—On Everyone Else, by James Beizer, Dec 14 p 54
Chile and Kennecott Both Claim Victory but Cerro Gets Paid, by James Beizer, Dec 7 p 71
Chile Copper Grab: An International Affair? by James Beizer, Sept 14 p 89
Chilean Tribunal—Hardly a Cent for Kennecott, Anaconda, by James Beizer, Aug 24 p 70
Mr. Allende Blames "Villains"—and to What End? by Gene Beaudet, Dec 14 p 3
This Means War—Legal War—Between Kennecott and Chile, by James Beizer, Oct 12 p 69

Chilean Copper Corp.:
Chilean Tribunal—Hardly a Cent for Kennecott, Anaconda, by James Beizer, Aug 24 p 70

Chilean Development Corp.:
Chilean Tribunal—Hardly a Cent for Kennecott, Anaconda, by James Beizer, Aug 24 p 70

Chilton Co.:
Public Image of Business Continues to Sag, by K. W. Bennett, Nov 9 p 52

China
China Trade: From Panda Pets to U.S. Jets? by K. A. Kaufman, July 13 p 27
What's All This Talk About U.S.-China Trade Boom? by K. A. Kaufman, Oct 19 p 23

Chromalloy American Corp.:
Metals Builders Build a Boom, by K. W. Bennett, Aug 24 p 65

Chrome Ore
House Cool to Embargo on Rhodesian Chrome, by K. A. Kaufman, Aug 24 p 23

Chrysler Corp.:
Can Detroit's Wand Turn Federal Safety Beast into a Beauty? by R. A. Guiles, Nov [illegible] p 27
Detroit Finds New Economies in Gearmaking, by W. G. Patton, Sept 21 p 55
Detroit's Auto-Parts Unit Struggles, by R. A. Guiles, Oct 19 p 79
Guardian Angels Descend on UAW Local Coffers, July 13 p 25
Machine Tools: Getting Ready for More Show (Biz), by R. A. Wilson, Aug 31 p 26
Plastics Will Not Steel the Show in 1973 Models, by R. A. Wilson, Aug 24 p 25
Turbine Trucks: Gimmick or Godsend? by R. A. Guiles, Dec 14 p 52

Cincinnati Milacron
Automation: Spreading Technology Too Thin? by J. E. Sandford, Dec 7 p 69
Dynamic Stiffness: A Performance Parameter, by R. A. Wilson, Dec 7 p 83
The Future Shock in Manufacturing, by J. E. Sandford, Aug 24 p 75
Getting Lathes Turning with the Super Tool, by R. A. Wilson, July 20 p 47
MT Show: The Global Scent of Fresh Sales Blood, by K. W. Bennett, Sept 14 p 49
The Precision Edge of Abrasive Cutting, by J. E. Sandford, Dec 14 p 62

Clark Equipment Co.:
Are Price Controls Out of Control? by G. J. McManus, Dec 14 p 48
Detroit Finds New Economies in Gearmaking, by W. G. Patton, Sept 21 p 55

Cleveland Cliffs Iron Co.:
Cleveland Cliffs Follows Hanna in Price Increase, Dec 21 p 39

Cleveland Turning Machine Div.:
Lathes Skirmish in Low-Cost Market, by J. E. Sandford, Sept 28 p 38
World Machine Tools: Service War? by R. A. Wilson, Aug 3 p 53

Coal
What You Gonna Do When the (Oil) Well Runs Dry? by R. A. Guiles, Nov 16 p 23

Coal Gas
New Entries Enrich Coalgas Interest, by G. J. McManus, July 6 p 28

Coatings
An Answer to 'How Tight is Tight?' by B. D. Wakefield, July 13 p 82
Bumpers Reflect Bright '73 for Platers, by J. J. Obrzut, Dec 14 p 68
Burning Wastes Test Mettle of Materials, by T. C. DuMond, Aug 10 p 52
Ceramic Coating System Controls Heat Flow, Sept 14 p 66
Coated Abrasive Field Has New Nitty-Gritty, by R. A. Wilson, Sept 14 p 65
Coating Extends Aluminum Potential, Sept 28 p 54
EB, UV Markets Take Off—but Not for Metals, by B. D. Wakefield, Oct 5 p 66
Good Pretreatment Corrects Problems on Coating Line, Aug 3 p 74
New Coatings Will Absorb Heat, Reflect Light, July 20 p 25
New Process Plates Composite Coating on Auto Parts, by W. G. Patton, Aug 17 p 50
Nonmetallic Coating Shows Promise for Cold-Heading Wire, July 27 p 59
No-Rinse Pretreatment Thwarts Pollution, Dec 7 p 90
Plastic Coating Gives Bright Future to Copper, Nov 16 p 25
Powder Coating: 'A Finisher's Finish', by J. J. Obrzut, Nov 16 p 67
Seashore Test Lot Has No Mercy on Metals, by J. J. Obrzut, Oct 19 p 94
Solvent-Free Coatings are Cured by Ultraviolet, Sept 7 p 27
Spray Powders Protect Wear Surfaces, Nov 9 p 31
Zinc-Rich Coatings Enroute for Auto, Appliance Use, by K. W. Bennett, Oct 12 p 42

Coils
Air Film Eases Steel Coil Moving, Oct 19 p 98
The Midi-Mill: It's a Different Ball Game, by G. J. McManus, Sept 7 p 95
No-Rinse Pretreatment Thwarts Pollution, Dec 7 p 90
Zinc-Rich Coatings Enroute for Auto, Appliance Use, by K. W. Bennett, Oct 12 p 42

Coke
Companies Jointly Sponsor Coke Pellet Pilot Plant, Sept 21 p 60
Pipeline Charging for Coke May Get Push from U. S. Steel, by G. J. McManus, July 13 p 67
Steelmakers Pin Hopes on Formed Coke, by G. J. McManus, Nov 2 p 52
USS Coke Ovens: Steel's Reluctant Leader, by G. J. McManus, Oct 5 p 67

Cold Forming
Drive Trains Warm to Cold-Forming, by R. A. Wilson, Aug 17 p 36
Parts "Born-to-Shape" for Economy, by T. C. DuMond, Oct 5 p 79

Cold Rolling
Continuous Cold Rolling is Now One Step Closer, by G. J. McManus, Sept 21 p 60

Columbia Gas System Service Corp.:
Low-Emission Iron Melting System Needs No Coke, Aug 24 p 31

Combustion
Compact Burner Churns Out Heat Fast, by J. J. Obrzut, Nov 23 p 91

Combustion Engineering, Inc.:
Pollution Control: It's Now a Package Deal, by K. W. Bennett, Nov 9 p 60
Profit Picture: Pleased as Punch, by J. M. Beattie, Nov 2 p 42
U. S.-Soviet Trade: Penpals Without Any Pens? by R. A. Wilson, Nov 30 p 42

Commodities Research Unit Ltd.:
Third Quarter for Copper—The Bears Take Over, by James Beizer, Nov 2 p 67

Compagnie du Nord (France)
Rothschilds: Buy the Suez, Form a Metals Company, by James Beizer, Dec 21 p 44

Composite Materials
Apollo 17 to Manufacture Space Materials, Dec 7 p 31
Exotic Alloys Come Back with Gas Turbines, by B. D. Wakefield, July 6 p 40
New Process Plates Composite Coating on Auto Parts, by W. G. Patton, Aug 17 p 50

Computers
Automaker Fights Pollution Via Computer, Aug 3 p 76
Computer Harmonizing Cuts Steel Costs, by B. D. Wakefield, Aug 31 p 34
Computer Hierarchy Governs Dutch Steel, by A. M. Greene, July 27 p 56
Computer-Memory Technology Takes a Bigger Byte, by K. W. Bennett, Aug 10 p 43
Computer Patent Battle Goes from Court to Congress, by K. A. Kaufman, Nov 30 p 45
Computer's Cousins Make New Moves, by J. E. Sandford, Sept 21 p 49
DNC Lines Link Cutting to New Future, by J. E. Sandford, Oct 26 p 46
Data Networks are a Vital Link for Industry, by A. M. Greene, Sept 21 p 53
Earnings Gain Seen from Computerized Capacity Planning, Nov 23 p 92
Hey You, the Computer Says Your Bus is Here, by D. N. Williams, July 6 p 20
Machine Tools Future: The Computer Grows Up, by J. M. Beattie, Nov 30 p 44
Mini-Computers: DECKing the Halls with Price Cuts? by R. A. Wilson, July 13 p 64
Yes, You Can Price Steel Orders by Computer, by P. J. Cathey, Dec 14 p 56

Concrete
LNG Tanks Gain Big Margin of Safety from Wire Girdle, by J. J. Obrzut, Aug 17 p 48

Conference Board
Management is Really Going Mod, by G. J. McManus, July 20 p 39
Primary Metals Doff Snail Image, Will Pace GNP, Study Says, by James Beizer, Dec 21 p 59

Congress Tool & Die Div.:
Skills Attrition Stifles T&D Shop Revival, by R. A. Wilson, Sept 28 p 36

Conservall, Inc.:
Pollution Control: It's Now a Package Deal, by K. W. Bennett, Nov 9 p 60

Consolidation Coal Co.:
Companies Jointly Sponsor Coke Pellet Pilot Plant, Sept 21 p 60
Steelmakers Pin Hopes on Formed Coke, by G. J. McManus, Nov 2 p 52

Construction Industry
Building Material Prices: New Ball Game, by G. J. McManus, Nov 23 p 67
Building Trades: Roundtable Planes Some Rough Edges, Oct 12 p 23
Construction Wages are Under Control? by G. J. McManus, Oct 12 p 46
Metals Builders Build a Boom, by K. W. Bennett, Aug 24 p 65
Metals Looks for a Home in Housing, by R. A. Wilson, Nov 9 p 56
Roundtable Casts Critical Eye at Hiring Halls, Aug 17 p 19

Consumerism
Aw, C'Mon, Ralph, You Know Better, by Gene Beaudet, Oct 12 p 5

Consumers Union
Justice Wants Suit Against Steel Quotas Put on Scrap Heap, by K. A. Kaufman, Sept 14 p 25

Continental Illinois Bank
Loans: Cheap Money Costs More, by K. A. Kaufman, Sept 7 p 85

Continental Machines, Inc.:
Custom-Cutting Creates Big Saw Market in U. S. Service Centers, by B. D. Wakefield, Oct 26 p 51

Continental Oil Co.:
Flexible System Simplifies Annealing of Pipe Welds, Nov 2 p 54

Continental Steel Corp.:
The Midi-Mill: It's a Different Ball Game, by G. J. McManus, Sept 7 p 95

Contract Dies, Inc.:
Plastic Metals Offer Flexibility in Tooling, Aug 17 p 52

Contractors Mutual Assn.:
Construction Wages are Under Control? by G. J. McManus, Oct 12 p 46

Convair Aerospace Div.:
PWM: New Tiger in Cutting Tools, by R. A. Wilson, July 13 p 69

Converters
Auto Emissions: Are Converters Coming for '75? by R. A. Guiles, Oct 5 p 68

Coolants
Chemical Coolant, Long Tool Life, July 20 p 50

Copper
Allende Fixes Blames—On Everyone Else, by James Beizer, Dec 14 p 54
Calm Market Has Strong Currents Flowing Underneath, Oct 19 p 132
Chile and Kennecott Both Claim Victory but Cerro Gets Paid, by James Beizer, Dec 7 p 71
Chile Copper Grab: An International Affair? by James Beizer, Sept 14 p 89
Chilean Tribunal—Hardly a Cent for Kennecott, Anaconda, by James Beizer, Aug 24 p 70
Copper Alloys Give a Damp, by T. C. DuMond, Nov 9 p 68
Copper Cartels? In Any Language it's a Loser, by James Beizer, Dec 21 p 41
Copper Company Balances Ecology with Economy, by James Beizer, Nov 2 p 49
Copper Consumption in '73 Should Absorb Hike in Output, by James Beizer, Dec 7 p 119
Copper in '73—Supply, Demand and Price Trends, by James Beizer, Oct 19 p 131
Copper Price Ought to Go Up or Down—It Probably Won't, Nov 30 p 67
Copper's Price for Cleaner Smelters: A Cool Half Billion, by K. A. Kaufman, Aug 3 p 85
Copper's Pricing Grand Master: It's Phelps Dodge Again, by J. M. Beattie, July 13 p 97
Court Slaps EPA and Lets Smelters Off Pollution Hook, by James Beizer, Dec 14 p 83
EPA Foils Probe of Smelter Rules, by James Beizer, Sept 7 p 89
Future Gleams for Copper Die Castings, by T. C. DuMond, Dec 21 p 50
Government Deals Copper Companies Dual Blow, by James Beizer, Sept 28 p 63
More About Smelters and the Environment, by James Beizer, Aug 17 p 61
Mr. Allende Blames "Villains"—and to What End? by Gene Beaudet, Dec 14 p 3
New Technology Triggers Copper Marketing Battle, by James Beizer, Dec 21 p 36

Nonferrous: All Nations are Not So Chile, by James Beizer, Oct 5 p 72
Olin Exec Pegs Nonferrous Growth in '73 to Economy, by James Beizer, Dec 21 p 59
Plastic Coating Gives Bright Future to Copper, Nov 16 p 25
Some Strange Happenings in the Copper Market, by James Beizer, Aug 31 p 45
Third Quarter for Copper—The Bears Take Over, by James Beizer, Nov 2 p 67
This Means War—Legal War—Between Kennecott and Chile, by James Beizer, Oct 12 p 69
World Copper Stocks Up; But Whither Go Prices? by James Beizer, Oct 5 p 123

Cooper-Bessemer Co.:
Gas-Fired Melting Cleans Up Foundries, Oct 26 p 53
Low-Emission Iron Melting System Needs No Coke, Aug 24 p 31

Copper Institute
Copper Price Ought to Go Up or Down—It Probably Won't, Nov 30 p 67
Some Strange Happenings in the Copper Market, by James Beizer, Aug 31 p 45

Copperweld Steel Co.:
Steel Earnings: The Only Way to Go is Up, by G. J. McManus, Aug 3 p 55
Steel Summary: Price Hikes and Profits Problems, Dec 7 p 117

Corrosion
Burning Wastes Test Mettle of Materials, by T. C. DuMond, Aug 10 p 52
Seashore Test Lot Has No Mercy on Metals, by J. J. Obrzut, Oct 19 p 94

Cost of Living Council
Control Blitz Keys on Prices, Not Wages, by K. A. Kaufman, Aug 24 p 67
Lifting Low-Wage Limit Raises Pay Boost Chances, Aug 3 p 5
Mining Congress Buries Optimism, by James Beizer, Sept 21 p 50
Post-Election Letdown May Include Phase III Blahs, by K. A. Kaufman, Nov 9 p 57

Council on Environmental Quality
Abatement Costs: No Expenses Will be Spared, Aug 24 p 27

Cranes
Recovery, Overseas Lift Crane Orders, by K. W. Bennett, Oct 26 p 39

Cross Co.:
When Wankel Puts it All Together—Watch Out, by D. N. Williams, Aug 3 p 61

Cuba
As You Say, Mr. Nixon, "Seize the Day!", by Gene Beaudet, Nov 30 p 3

Cubic Boron Nitride
The Precise Edge of Abrasive Cutting, by J. E. Sandford, Dec 14 p 62

Cummins Engine Co.:
Turbine Trucks: Gimmicks or Godsend? by R. A. Guiles, Dec 14 p 52

M. E. Cunningham Co.:
U. S. Comes in Ninth on Inflation, by G. J. McManus, July 13 p 33

Cupolas
Tired Old Cupolas Rely on Oxygen for a Second Wind, Dec 21 p 52

Curtiss-Wright Corp.:
When Wankel Puts it All Together—Watch Out, by D. N. Williams, Aug 3 p 61

Cutting Fluids
Breathe Easier with Antimist Cutting Oil, by J. J. Obrzut, July 27 p 58
Cutting Fluid Works on New Principle, Sept 28 p 54

Cutting Tools
Adavanced Ceramics Solve Special Problems, by A. M. Greene, Nov 9 p 70
Chemical Coolant, Long Tool Life, July 20 p 50
Custom-Cutting Creates Big Saw Market in U. S. Service Centers, by B. D. Wakefield, Oct 26 p 51
The Finest Cutting You'll Ever See, Dec 7 p 85
The Future Shock in Manufacturing, by J. E. Sandford, Aug 24 p 75
Getting Lathes Turning with the Super Tool, by R. A. Wilson, July 20 p 47
PWM: New Tiger in Cutting Tools, by R. A. Wilson, July 13 p 69
Packaging Adds Cost Appeal to NC, by J. E. Sandford, July 20 p 52
The Precision Edge of Abrasive Cutting, by J. E. Sandford, Dec 14 p 62
Super Tools for Superalloys, by R. A. Wilson, Oct 19 p 96
Water-Table Traps Fumes and Noise in Torch Cutting, by J. J. Obrzut, Sept 14 p 67

Cyclops Corp.:
Nonmetallic Coating Shows Promise for Cold-Heading Wire, July 27 p 59
Parts "Born-to-Shape", for Economy, by T. C. DuMond, Oct 5 p 79

Cylinders
Aluminum Invades Steel's Market for High Pressure Tanks, by James Beizer, Nov 9 p 69

Cyril Bath Co.:
Extrusion Bending is a No-Scrap Operation, by R. A. Wilson, Aug 31 p 38

D

Danly Machine Corp.:
Digital Machine Control Gives NC Another Dimension, by B. D. Wakefield, Aug 10 p 58

Data Communications Group
Data Networks are a Vital Link for Industry, by A. M. Greene, Sept 21 p 53

Data General Corp.:
Mini-Computers: DECKing the Halls with Price Cuts? by R. A. Wilson, July 13 p 64

Davenport Systems Div.:
Latest PC Uses its Memory to Cut Cost Per Function, Oct 19 p 98

Davidson Div.:
Detroit Escalates Weight War: Plastic Seems Main Weapon, by R. A. Guiles, Oct 26 p 21

DeBeers Industrial Div.:
The Precision Edge of Abrasive Cutting by J. E. Sandford, Dec 14 p 62

Deburring, Inc.:
Machining's Exotic Sleeper Comes on Strong, by K. W. Bennett, Sept 7 p 87

Deere & Co.:
Deere to Break Bottlenecks with More Bucks, by K. W. Bennett, Aug 24 p 68
Farm Equipment: The Lush Years Return, by K. W. Bennett, July 27 p 44
Farm Machinery Set to Reap a Big '73, by K. W. Bennett, Nov 16 p 58

Defense
Congress or No-President Will Cut Federal Spending, by K. A. Kaufman, Oct 26 p 19
Defense Budget Cuts Could Torpedo Some in Metalworking, by K. A. Kaufman, Sept 21 p 21

Denison Div.:
The Precision Edge of Abrasive Cutting, by J. E. Sandford, Dec 14 p 62

Design Digest—Weekly Report of New Materials, Components and Engineering Ideas

Design Engineering
Let Cost-Cutters Monitor Designers' Dreams, by P. J. Cathey, Aug 31 p 30

Devcon Corp.:
Plastic Metals Offer Flexibility in Tooling, Aug 17 p 52

DeVilbiss Co.:
Powder Coating: 'A Finisher's Finish', by J. J. Obrzut, Nov 16 p 67

DeVlieg Machine Co.:
MT Builders Eye $5 Billion Soviet Market, by Gene Beaudet, Nov 9 p 58
MT Show: The Global Scent of Fresh Sales Blood, by K. W. Bennett, Sept 14 p 49

Diamond Products Div.:
The Precise Edge of Abrasive Cutting, by J. E. Sandford, Dec 14 p 62

Diamond-Shamrock Corp.:
Zinc-Rich Coatings Enroute for Auto, Appliance Use, by K. W. Bennett, Oct 12 p 42

Diamonds
Diamond Wheel Grinds "Impossible" Drill Materials, July 27 p 57
The Finest Cutting You'll Ever See, Dec 7 p 85
The Precision Edge of Abrasive Cutting by J. E. Sandford, Dec 14 p 62

Die Casting Industry
In '68—Anyone for Ferrous Diecasting? Now There Is! by R. A. Wilson, July 27 p 46

Diffusion Bonding
Diffusion Bonding Joins Titanium for Atom Smasher, Oct 26 p 53
Liquid Layer Aids Jet Blade Bonding, Nov 2 p 55

Digital Equipment Corp.:
Data Networks are a Vital Link for Industry, by A. M. Greene, Sept 21 p 53
Mini-Computers: DECKing the Halls with Price Cuts? by R. A. Wilson, July 13 p 64

Disasters
Industry and Agnes: Only the Ark Was Missing, by J. M. Beattie, G. J. McManus and D. N. Williams, July 6 p 29

Disston, Inc.:
Disston: The Abandoned Baby Gets Fat, by G. J. McManus, Sept 14 p 54

Distrigas Corp.:
LNG Tanks Gain Big Margin of Safety from Wire Girdle, by J. J. Obrzut, Aug 17 p 48
Wire-Wrapped LNG Storage Tanks Withstand Impact, Aug 10 p 29

Doehler-Jarvis Div.:
When Wankel Puts it All Together—Watch Out, by D. N. Williams, Aug 3 p 61

Dominican Republic
New Nickel Capacity in Oversupply Period? by James Beizer, July 27 p 49

R. R. Donnelly & Sons
Job Tests: A Testy Question About Validity, by K. W. Bennett, Sept 28 p 41

Double-A Products Co.:
Foreign Fluid Power Powers Up, by K. W. Bennett, Nov 23 p 66

Douglas Aircraft Co.:
See: McDonnell Douglas Astronautics Co.

Dow Chemical Co.:
Appliances: Steel Tries to Brake Plastics Trend, by G. J. McManus, Aug 10 p 39
Detroit Escalates Weight War: Plastic Seems Main Weapon, by R. A. Guiles, Oct 26 p 21
Magnesium: There's Action in Them Thar Hills, by R. R. Irving, Nov 9 p 64
Sure, Care About Society, But Make a Buck, Too, Dec 14 p 25

D. A. Drader Production Technology Div.:
Tool Show's Second Week Draws Fat Wallets, by K. W. Bennett, Sept 21 p 47

Dravco Corp.:
Barter Surfaces as an International Trade Tool, by I. G. Black, Nov 2 p 39
Companies Jointly Sponsor Coke Pellet Pilot Plant, Sept 21 p 60
Construction Wages are Under Control? by G. J. McManus, Oct 12 p 46
Pollution Control: It's Now a Package Deal, by K. W. Bennett, Nov 9 p 60
Profit Picture: Pleased as Punch, by J. M. Beattie, Nov 2 p 42
Steel-Tied Panels Make Tracks in Rail Market, Aug 10 p 55

Dresser Industries, Inc.:
The Precise Edge of Abrasive Cutting, by J. E. Sandford, Dec 14 p 62

Drilling
Diamond Wheel Grinds "Impossible" Drill Materials, July 27 p 57
Gun Drilling Goes to the Workpiece, Dec 14 p 66

Drive Systems
Bull Gear Flexing Won't Bully New Drive, by R. A. Wilson, Sept 7 p 101

Ductile Iron
Foundries Heat Up for Demand Push, by R. A. Wilson, Oct 5 p 65

E. I. duPont de Nemours & Co.:
Powder Coating: 'A Finisher's Finish', by J. J. Obrzut, Nov 16 p 67

Dynamic Sciences, Inc.:
Round Two: Safety Rules Coming for Recreational Vehicles, by R. A. Guiles, Sept 14 p 55

E

ESAB-HEBE (Germany)
Ship Hull Section Takes Two Hours to Build, Sept 14 p 68

Earthmoving Machinery
GM Reincarnates in Off-Road Haulers as Terex, by R. A. Wilson, Aug 10 p 45

Easco Sparcatron Co.:
Gearmakers Watch the New Developments, by W. G. Patton, Sept 14 p 61

East Carolina Steel Co.:
Furnace Economics Expand Mini-Mills, by G. J. McManus and K. W. Bennett, Dec 14 p 50

Eastern Gas & Fuel Associates
New Entries Enrich Coalgas Interest, by G. J. McManus, July 6 p 28

Eaton Corp.:
Forging Line Geared to High Production, by W. G. Patton, July 20 p 54

Ecodyne Corp.:
Pollution Control: It's Now a Package Deal, by K. W. Bennett, Nov 9 p 60

Ecology
SEE: Environment Pollution, Air Pollution, Water, Environmental Protection Agency, Waste Management.

Economics
Are Controls Heading U. S. into New Inflation? by K. A. Kaufman, Dec 21 p 21
The Best Things in Life Cost Something, by Gene Beaudet, Sept 14 p 5
Control Blitz Keys on Prices, Not Wages, by K. A. Kaufman, Aug 24 p 67
Controls Here to Stay? Forever? by Gene Beaudet, Nov 9 p 5
Controls Working but Burns Urges More, by K. A. Kaufman, Aug 10 p 41
Economic Index: Breadwinners Say it's Getting Better, by D. N. Williams, July 27 p 45
Here Comes the Old Money Game —and U. S. Dollar is 'It', by K. W. Bennett, Dec 7 p 72
Hit 'Em! Drag 'Em Down! Kick 'Em! by Gene Beaudet, Aug 10 p 5
If Auto Sales Pace Economy— We're Home Free, by D. N. Williams, July 13 p 65
Is a New NEP Shaping Up? by J. D. Baxter, Nov 16 p 61
Lower the Barriers at Home and Abroad, by Gene Beaudet and G. J. McManus, July 13 p 72
McGovern Economics: Did He Make Any Bulls out of Bears? by K. A. Kaufman, Sept 7 p 89
Move Over, Santa, '73s Got its Own Bag of Goodies, by R. A. Guiles, Nov 23 p 64
'73 May Boom, But Continued Controls are Almost Certain, by K. A. Kaufman, Nov 23 p 65
Nixon and Congress: Four-Year Money Fight? by K. A. Kaufman, Nov 16 p 55
Nixon Puts the Axe to Federal Spending, by K. A. Kaufman, Oct 19 p 23
Now, Does Everyone Feel Better? OK? by Gene Beaudet, Aug 3 p 5
Post-Election Letdown May Include Phase III Blahs, by K. A. Kaufman, Nov 9 p 57
Profit Picture: Pleased as Punch, by J. M. Beattie, Nov 2 p 42
Surprise, Surprise . . ., Surprise? by J. M. Beattie, Dec 14 p 48
U. S. Comes in Ninth on Inflation, by G. J. McManus, July 13 p 33
Who Has a Good Thing Going? by Gene Beaudet, Oct 26 p 5
Why Don't They Lay Off the Sauce? by Gene Beaudet, July 6 p 5
Will Success Spoil Inflation Controls? by K. W. Bennett, Dec 21 p 42
The Yen Looks to Value-Up—and Japan's Not Happy, by R. A. Guiles, Dec 7 p 72
Yes, But Have We Learned Anything? by Gene Beaudet, Dec 21 p 3
You Were There, What Do You Think? by Gene Beaudet, Aug 17 p 5

Edison Electric Institute
Energy Crisis: The Big Turn Off? by J. M. Beattie, Dec 7 p 70

Eisenwerk-Gesellschaft-Maxmillianshütte, m.b.h.:
Will SIP Add New Zip to Tired Openhearths? by J. M. Beattie, Aug 31 p 27

Elections (Presidential)
The Elephant Tip-Toes Through Labor's Rose Garden, Aug 31 p 13
Hit 'Em! Drag 'Em Down! Kick 'Em! by Gene Beaudet, Aug 10 p 5
It May be Show Biz, But is it Good Biz? by Gene Beaudet, Sept 21 p 5
Labor Day: Only Politicians Didn't Take a Vacation, Sept 14 p 23
Labor Splinter Groups: A Thorn in Meany's Side? Sept 7 p 21
Laborites for McGovern Close Their Ranks, Aug 24 p 21
McGovern Economics: Did He Make Any Bulls out of Bears? by K. A. Kaufman, Sept 7 p 89
McGovern for President? No Thanks, Executives, July 6 p 16
McGovern Mellowing Tough Stand on Business Laws, by K. A. Kaufman, July 27 p 21
McGovern Woos Labor Support with Rigged Base-Wage Voting, by K. A. Kaufman, July 27 p 43
Meany, McGovern and the Time for Decision, by C. J. Suchocki, July 20 p 17
Meany's Polity: A Curse on Both Your Houses, July 27 p 19
New Workmen's Comp: Campaign Bait? by J. M. Beattie, Aug 10 p 44
Nixon Doesn't Have a Strike Against Him in '72, by K. A. Kaufman, Aug 3 p 25
Politics: Strange Bedfellows Mate, by K. A. Kaufman, James Beizer, J. M. Beattie and G. J. McManus, July 20 p 33
USWA Stands by George—as In Meany, by George! Aug 10 p 21

Electric Discharge Machining
EDM Puts Precision Holes in Hard Metals, by W. G. Patton, Nov 30 p 56
Gearmakers Watch the New Developments, by W. G. Patton, Sept 14 p 61
Machining's Exotic Sleeper Comes on Strong, by K. W. Bennett, Sept 7 p 87
Tool Show's Second Week Draws Fat Wallets, by K. W. Bennett, Sept 21 p 47

Electric Furnace Co.:
Steel Mills Get Out from Beneath Electrical Sheets, by G. J. McManus, July 6 p 30

Electric Power Production
Energy Crisis: The Big Turn Off? by J. M. Beattie, Dec 7 p 70
Steel Mills Get Out from Beneath Electrical Sheets, by G. J. McManus, July 6 p 30

Electro-Glo Co.:
Machining's Exotic Sleeper Comes on Strong, by K. W. Bennett, Sept 7 p 87

Electron Beams
EB, UV Markets Take Off—but Not for Metals, by B. D. Wakefield, Oct 5 p 66
Electron Beams Broaden their Metalworking use, by Raymond Shah, Sept 28 p 47
The Future Shock in Manufacturing, by J. E. Sandford, Aug 24 p 75
Laser Welding Comes Back to Life, Oct 12 p 55
Lasers Challenge Electron Beam Welding in Speed, Quality, by B. D. Wakefield, Dec 7 p 88

Electronic Data Processing
Data Networks are a Vital Link for Industry, by A. M. Greene, Sept 21 p 53
How Can Steel Use Virtual Storage in its Computers? Aug 31 p 39
Yes, You Can Price Steel Orders by Computer, by P. J. Cathey, Dec 14 p 56

Electronic Devices & Controls
Die Casting and Solid State Controls Mix, by B. D. Wakefield, Nov 2 p 56
Powder Coating: 'A Finisher's Finish', by J. J. Obrzut, Nov 16 p 67

Electropolishing
Machining's Exotic Sleeper Comes on Strong, by K. W. Bennett, Sept 7 p 87

Electroslag
The Future of Forging: Help! by J. M. Beattie, Oct 12 p 44
Plate Steels Score Breakthrough in Quality, by R. R. Irving, Oct 12 p 50
Russian ESR Goes on Stream in Sweden, by P. J. Mullins, Dec 7 p 87
Russia's Technology Curtain to be Raised? by J. M. Beattie, Aug 24 p 69
Will Industry Demand ESR Quality in Carbon Steels? by R. R. Irving, Aug 3 p 69

Elgin National Industries, Inc.:
The Precise Edge of Abrasive Cutting, by J. E. Sandford, Dec 14 p 62

Eltee Pulsitron Co.:
Tool Show's Second Week Draws Fat Wallets, by K. W. Bennett, Sept 21 p 47

Empire Detroit Steel Co.:
Safety Bumps Up High-Strength Steel Stock, by R. A. Guiles, Nov 16 p 20

Employment
And Now—Would you Believe—an Engineer Shortage? Oct 12 p 31
Is Ecology Slowing the Recovery? by Gene Beaudet, July 27 p 5
Job Tests: A Testy Question About Validity, by K. W. Bennett, Sept 28 p 41
Lamebrain Hiring Thwarts Handicapped, by K. W. Bennett, July 20 p 36
Manufacturers Up Output with Less Workers, by G. J. McManus, Sept 14 p 52
You're Hired, but First this Little Test? by R. A. Guiles, Oct 5 p 70

Enamel Products and Plating Co.:
Air Film Eases Steel Coil Moving, Oct 19 p 98

Energy
Energy Crisis: The Big Turn Off? by J. M. Beattie, Dec 7 p 70
The Energy Outlook: Better Late than Never? by K. A. Kaufman, Dec 21 p 21
What Ya Gonna Do When the (Oil) Well Runs Dry? by R. A. Guiles, Nov 16 p 23

Engelhard Minerals & Chemicals Corp.:
Auto Emission Uses Will Make Platinum Even More Precious, by James Beizer, Nov 23 p 115
Auto Emissions: Are Converters Coming for '75? by R. A. Guiles, Oct 5 p 68
What's So Rare About a Rare-Earth Story? by James Beizer, Aug 10 p 40

Engineering
And Now—Would you Believe—an Engineer Shortage? Oct 12 p 31

Engineers Joint Council
And Now—Would you Believe—an Engineer Shortage? Oct 12 p 31

Engines, Automobile
Ford Engine Flunks EPA Emissions Test, Will Try, Try Again, Oct 5 p 25
Ford Mulls Honda Tie-Up, Eyes New "Clean" Engine, Nov 9 p 29
GM's Wankel in White's Canton Plant? by G. A. Weimer, Nov 30 p 41
Gearmakers Watch the New Developments, by W. G. Patton, Sept 14 p 61
Stirling Engines: A Golden Oldie, but is it Sterling? by R. A. Wilson, Aug 17 p 23
Turbine Trucks: Gimmick or Godsend? by R. A. Guiles, Dec 14 p 52
Wankel Machine Tools Up and Running, But Where? by R. A. Wilson, Aug 31 p 15
Wankel on the Way, But Good Ol' V-8 Isn't Doomed Yet, by R. A. Guiles, Dec 14 p 21
When Wankel Puts it All Together—Watch Out, by D. N. Williams, Aug 3 p 61

Engines, Truck
Turbine Trucks: Gimmick or Godsend? by R. A. Guiles, Dec 14 p 52

Environment—News and Technical Information on Environmental Factors Affecting Metalworking Industry

Environment
Ecology in Early Planning Necessary, Says Congressman, by James Beizer, Sept 28 p 63
Is Ecology Slowing the Recovery? by Gene Beaudet, July 27 p 5
RRs vs Recyclers: SCRAP for Scrap's Sake, by C. J. Suchocki, July 27 p 25

Environmental Protection Agency
Auto Emissions: Are Converters Coming for '75? by R. A. Guiles, Oct 5 p 68
Congress Sends Tough Clean-Stream Measure to Nixon, by K. A. Kaufman, Oct 12 p 25
Copper's Price for Cleaner Smelters: A Cool Half Billion, by K. A. Kaufman, Aug 3 p 85
Court Slaps EPA and Lets Smelters Off Pollution Hook, by James Beizer, Dec 14 p 83
EPA Environmental Management Blasted as 'Inadequate', by James Beizer, Dec 14 p 23
EPA Foils Probe of Smelter Rules, by James Beizer, Sept 7 p 89
EPA May "Formally" OK Some Excess Plant Emissions, Sept 7 p 17
EPA vs Mills: Costs are in Eye of Beholder, by G. J. McManus, Oct 12 p 43
Ford Engine Flunks EPA Emissions Test, Will Try, Try Again, Oct 5 p 25
More About Smelters and the Environment, by James Beizer, Aug 17 p 61
Race to Stifle SO_2 Offers $10 Billion Purse, by K. W. Bennett, Oct 19 p 80
Turbine Trucks: Gimmick or Godsend? by R. A. Guiles, Dec 14 p 52
USS Coke Ovens: Steel's Reluctant Leaders, by G. J. McManus, Oct 5 p 67
Water Treatment—Is $5 Billion Enough? Too Little, Too Late? Dec 7 p 23

Equal Employment Opportunity Commission
Job Test: A Testy Question About Validity, by K. W. Bennett, Sept 28 p 41

You're Hired, but First this Little Test? by R. A. Guiles, Oct 5 p 70

Equilease Corp.:
Tool Show's Second Week Draws Fat Wallets, by K. W. Bennett, Sept 21 p 47

Esco Corp.:
At the Casters, When it Rains Orders it Pours, by K. W. Bennett, Nov 30 p 39

Essex Castings, Inc.:
Foundries Heat Up for Demand Push, by R. A. Wilson, Oct 5 p 65

Euclid Road Machinery Co.:
GM Reincarnates in Off-Road Haulers as Terex, by R. A. Wilson, Aug 10 p 45

European Economic Community
Exporter Memo: Dump Before the Phantom Strikes, by C. J. Suchocki, July 13 p 31
The Future Shock in Manufacturing, by J. E. Sandford, Aug 24 p 75
Here Comes the Old Money Game —and U. S. Dollar is 'It', by K. W. Bennett, Dec 7 p 72
Ireland: The New Gateway to the Common Market? by J. M. Beattie, Dec 21 p 23

Ex-Cello-O Corp.:
Machine Tools: Getting Ready for More Show (Biz), by R. A. Wilson, Aug 31 p 26
Tool Show's Second Week Draws Fat Wallets, by K. W. Bennett, Sept 21 p 47

Executives, Men on the Move, Who's Who in Metalworking

Executives
Exec Pay Hikes Were 4.8 Pct in '71; Within Guidelines, Oct 26 p 44
Management is Really Going Mod, by G. J. McManus, July 20 p 39
New GM Game: Let's Play I've Got a Secret? by R. A. Guiles, Dec 21 p 39

Exomet, Inc.:
Flexible System Simplifies Annealing of Pipe Welds, Nov 2 p 54

Experimental Aircraft Assn.:
Little Planes Lift Aero Market, by K. W. Bennett, Aug 31 p 25

Explosives
Tubes Expanded by Explosives, Aug 3 p 75

Extrusion
Extrusion Bending is a No-Scrap Operation, by R. A. Wilson, Aug 31 p 38
Large-Diameter Plastic Pipe Extruded on Site, Nov 23 p 31

F

FMC Corp.:
Farm Machinery Set to Reap a Big '73, by K. W. Bennett, Nov 16 p 58
New Entries Enrich Coalgas Interest, by G. J. McManus, July 6 p 28
Steelmakers Pin Hopes on Formed Coke, by G. J. McManus, Nov 2 p 52

Factories
Bargain Plant Leases Disappear, by K. W. Bennett, July 13 p 66

Factory Mutual Engineering Corp.:
OSHA May Certify Private Labs to OK Equipment, by R. A. Guiles, Sept 21 p 25

Fairfield Mfg. Co.:
Getting Lathes Turning with the Super Tool, by R. A. Wilson, July 20 p 47

Falconbridge Dominicana, C por A
New Nickel Capacity in Oversupply Period? by James Beizer, July 27 p 49

Falconbridge International Ltd.:
New Nickel Capacity in Oversupply Period? by James Beizer, July 27 p 49

Falconbridge Nickel Mines, Ltd.:
After Nickel Labor Settles, Can a Price Hike be Far Behind? by James Beizer, July 20 p 37
New Nickel Capacity in Oversupply Period? by James Beizer, July 27 p 49
Nickel Price Boost Comes as No Surprise, by James Beizer, Sept 7 p 90
Nickel's Recovery Sets Example for Metals Companies, by James Beizer, Nov 16 p 95

Farm Equipment
Deere to Break Bottlenecks with More Bucks, by K. W. Bennett, Aug 24 p 68
Farm Equipment: The Lush Years Return, by K. W. Bennett, July 27 p 44
Farm Machinery Set to Reap a Big '73, by K. W. Bennett, Nov 16 p 58

Farrel Co.:
Large Lathes Don't Have to be Noisy, by R. A. Wilson, Dec 21 p 48

Fasteners
An Answer to 'How Tight is Tight?' by B. D. Wakefield, July 13 p 82
Nonmetallic Coating Shows Promise for Cold-Heading Wire, July 27 p 59
Priorities Can Turn a Company Around, by J. M. Beattie, Aug 10 p 48
Shutdowns: One Company's Loss is Another's Gain, by G. J. McManus, Nov 23 p 61
Vibration Couldn't Shake this Bolt Loose, by J. J. Obrzut, Sept 21 p 59
With Profits Elusive, Republic Steel Says "Nuts" to Bolts, by R. A. Wilson, Nov 16 p 61

Federal-Mogul Corp.:
PM Parts Production Finally Hits the Big Time, by W. A. Patton, Sept 7 p 86
Parts "Born-to-Shape" for Economy, by T. C. DuMond, Oct 5 p 79

Federal Power Commission
Energy Crisis: The Big Turn Off? by J. M. Beattie, Dec 7 p 70

Federal Products Co.:
The Precision Edge of Abrasive Cutting, by J. E. Sandford, Dec 14 p 62

Federal Reserve Board
Controls Working but Burns Urges More, by K. A. Kaufman, Aug 10 p 41
Loans: Cheap Money Costs More, by K. A. Kaufman, Sept 7 p 85
Will Success Spoil Inflation Controls? by K. W. Bennett, Dec 21 p 42

Federal Trade Commission
Finding the Key to Board Interlocks, Dec 7 p 73

Fellows Corp.:
MT Builders Eye $5 Billion Soviet Market, by Gene Beaudet, Nov 9 p 58

Femco Mfg. Co., Inc.:
Breathe Easier with Antimist Cutting Oil, by J. J. Obrzut, July 27 p 58

Ferrodyne Corp.:
In '68—Anyone for Ferrous Diecasting? Now There Is! by R. A. Wilson, July 27 p 46
Parts "Born-to-Shape" for Economy, by T. C. DuMond, Oct 5 p 79

Fiat, S. p. A.:
Die Casting Variables Controlled by Computer, Oct 26 p 25

Fiberglass
Fiberglass Barges Ready for Sea Duty, Sept 28 p 52

Finance
Anaconda Puts its Financial House Back in Order, by James Beizer, Aug 10 p 67
Bethlehem Buys New Clean-Up Gear with Bonds, Sept 7 p 17
Changing the Almighty Dollar, by G. J. McManus, Oct 26 p 34
Deere to Break Bottlenecks with More Bucks, by K. W. Bennett, Aug 24 p 68
Earnings Gain Seen from Computerized Capacity Planning, Nov 23 p 92
Earnings Reports Net Only a Few, Reluctant Smiles, by James Beizer, Nov 9 p 87
Finding the Key to Board Interlocks, Dec 7 p 73
Here Comes the Old Money Game —and U.S. Dollar is 'It', by K. W. Bennett, Dec 7 p 72
Holding Companies are Losing their Grip, by G. J. McManus, Aug 3 p 56
Loans: Cheap Money Costs More, by K. A. Kaufman, Sept 7 p 85
Machine Tools Future: The Computer Grows Up, by J. M. Beattie, Nov 30 p 44
Mr. Shultz, Our Hat's Off to You! by Gene Beaudet, Oct 5 p 5
Nixocrats Nix Interest Controls for Present, by K. A. Kaufman, Nov 2 p 21
Profit Picture: Pleased as Punch, by J. M. Beattie, Nov 2 p 42
Slowly Nonferrous Earnings Log Gains, by James Beizer, Aug 10 p 46
Steel Earnings: The Only Way to Go is Up, by G. J. McManus, Aug 3 p 55
U. S. International Money Proposals Get Foreign Nod, by K. A. Kaufman, Oct 5 p 21
White House Sees Chance for Budget Lid, by K. A. Kaufman, Sept 7 p 23
Why Not Try a Profit Increase Instead of a Price Increase? by G. J. McManus, Aug 17 p 37
Will Success Spoil Inflation Controls? by K. W. Bennett, Dec 21 p 42
The Yen Looks to Value-Up—and Japan's Not Happy, by R. A. Guiles, Dec 7 p 72
Yes, But Have We Learned Anything? by Gene Beaudet, Dec 21 p 3

A. Finkel & Sons Co.:
The Future of Forging: Help! by J. M. Beattie, Oct 12 p 44

First National Bank of the City of New York
Loans: Cheap Money Costs More, by K. A. Kaufman, Sept 7 p 85

Flamex Systems, Inc.:
Chemical Boost Raises Efficiency of Fuel Gases, Aug 17 p 25
Dry Compound Boosts Efficiency of Fuel Gases, by R. R. Irving, Nov 2 p 54

Fleetwood Enterprises, Inc.:
Mobile Homes: Tomorrow's Recession-Proof Market? by K. W. Bennett, July 6 p 25

Flick-Reedy Corp.:
Foreign Fluid Power Powers Up, by K. W. Bennett, Nov 23 p 66

Floods
See: Disasters

Fluid Power
Foreign Fluid Power Powers Up, by K. W. Bennett, Nov 23 p 66

Foam Materials
Foamed Resins Vie for Sheet Metal Jobs, Nov 30 p 58

Ford, Bacon & Davis, Inc.:
Energy Crisis: The Big Turn Off? by J. M. Beattie, Dec 7 p 70

Ford Motor Co.:
Automakers' New Sales Road—Rec Vehicles, by R. A. Guiles, Sept 28 p 42
Can Detroit's Wand Turn Federal Safety Beast into a Beauty? by R. A. Guiles, Nov 9 p 27
Detroit Finds New Economies in Gearmaking, by W. G. Patton, Sept 21 p 55
Ford Engine Flunks EPA Emissions Test, Will Try, Try Again, Oct 5 p 25
Ford Mulls Honda Tie-Up, Eyes New "Clean" Engine, Nov 9 p 29
Ford Will Build in Taiwan—Speculation Now Shifts to Spain, Dec 7 p 27
The Future Shock in Manufacturing, by J. E. Sandford, Aug 24 p 75
Grease Monkey: Auto Jungle's Dying Species, by R. A. Guiles, Sept 28 p 22
If Auto Sales Pace Economy—We're Home Free, by D. N. Williams, July 13 p 65
Monotony: Labor's Liveliest Issue in '73? by R. A. Guiles, Dec 7 p 77
Multinationalism: Industry and Labor Go Begging, by R. A. Guiles, Nov 2 p 19
Stirling Engines: A Golden Oldie, but is it Sterling? by R. A. Wilson, Aug 17 p 23
Truck Sales Keep on 'Truckin', by R. A. Guiles, Dec 21 p 38
Turbine Trucks: Gimmick or Godsend? by R. A. Guiles, Dec 14 p 52
When Wankel Puts it All Together —Watch Out, by D. N. Williams, Aug 3 p 61

Forecasting
Bumpers Reflect Bright '73 for Platers, by J. J. Obrzut, Dec 14 p 68
Copper Consumption in '73 Should Absorb Hike in Output, by James Beizer, Dec 7 p 119
Copper in '73—Supply, Demand and Price Trends, by James Beizer, Oct 19 p 131
How Much Will Auto Prices Go Up? by D. N. Williams, July 13 p 65
Is a New NEP Shaping Up? by J. D. Baxter, Nov 16 p 61
Is Market's Summer Vacation Coming to an End? Aug 3 p 86
Mobile Homes: Tomorrow's Recession-Proof Market? by K. W. Bennett, July 6 p 25
Move Over, Santa, '73s Got its Own Bag of Goodies, by R. A. Guiles, Nov 23 p 64
1973: Every Day We'll Get Bigger and Better in Every Way, by K. A. Kaufman, Nov 9 p 25
'73 May Boom, But Continued Controls are Almost Certain, by K. A. Kaufman, Nov 23 p 65
Nixon and Congress: Four-Year Money Fight? by K. A. Kaufman, Nov 16 p 55
Now, About the Next 'Four More Years', by Gene Beaudet, Nov 16 p 5

Now, Does Everyone Feel Better? OK? by Gene Beaudet, Aug 3 p 5
Olin Exec Pegs Nonferrous Growth in '73 to Economy, by James Beizer, Dec 21 p 59
Steel Summary: Bigger and Better in 1973? Dec 14 p 81
Steel Summary: Fingers Crossed on 'Super Year', Nov 23 p 113
Steel Summary: Going to Get Better in '73, Dec 21 p 58
Steel Summary: Looking Ahead for Price Relief, Aug 24 p 115
Steel Summary: On the Brink of a Boom? Aug 3 p 83
Steel Summary: 100 Million Tons Possible in 1973, Nov 16 p 93
Steel Summary: Sticking to the Early Forecasts, July 13 p 95
Will Success Spoil Inflation Controls? by K. W. Bennett, Dec 21 p 42
Yes, But Have We Learned Anything? by Gene Beaudet, Dec 21 p 3

Foreign Trade

Barter Surfaces as International Trade Tool, by I. G. Black, Nov 2 p 39
China Trade: From Panda Pets to U.S. Jets? by K. A. Kaufman, July 13 p 27
'Do it Yourself' Russian Trade, by D. N. Williams, July 6 p 27
Drumming Up Some Business at a Machine Tool 'Sale', July 20 p 23
Export Scrap—Believe it or Not—Returns to Life, July 20 p 68
Exports Help a Dull Market to Limp Along, Sept 7 p 144
Figuring How Much Export May Improve is Difficult, Aug 24 p 118
Foreign Inflation: U.S.'s New Trade Ally? by G. J. McManus, Aug 3 p 59
Foreign Tool Exports from India Inch Up but Bicycles Boom, Oct 26 p 23
Here Comes the Old Money Game—and U. S. Dollar is 'It', by K. W. Bennett, Dec 7 p 72
House Cool to Embargo on Rhodesian Chrome, by K. A. Kaufman, Aug 24 p 23
Import Quantities Dip, but the Quality Grows, Oct 5 p 121
Japan Renews Push into U. S. Plants, Hitachi is Latest, by I. G. Black, Sept 28 p 39
Lower the Barriers at Home and Abroad, by Gene Beaudet and G. J. McManus, July 13 p 72
MT Builders Eye $5 Billion Soviet Market, by Gene Beaudet, Nov 9 p 58
Mexico's Growth—Building Solidly, But Fast, by K. W. Bennett, Nov 23 p 69
Multinationalism: Industry and Labor Go Begging, by R. A. Guiles, Nov 2 p 19
No Time to Catch Up on Our Z's, by Gene Beaudet, July 13 p 5
Recovery, Overseas Lift Crane Orders, by K. W. Bennett, Oct 26 p 39
Red Lend-Lease Pact Opens Trade for U. S., Sept 21 p 46
'Regional' Foreign Dumping Will be One Target of New Bill, by K. A. Kaufman, Nov 23 p 25
Russians are Coming this Fall to Talk About Trade Pact! by K. A. Kaufman, Aug 24 p 23
Senate Passes Bill to Trim Restricted Export List, by K. A. Kaufman, Aug 10 p 23
Steel Summary: World-Steel Trade Weighs on Deficit, July 6 p 51
Thought Dead, Buy American Specialty Steel Bill Lives, by K. A. Kaufman, Oct 19 p 81
U.S. Comes in Ninth on Inflation, by G. J. McManus, July 13 p 33
U.S.-Soviet Trade: Penpals Without Any Pens? by R. A. Wilson, Nov 30 p 42
U.S.-Soviet Trade Talks are Getting Down to the Basics, by K. A. Kaufman, July 20 p 19
VIP Soviet Trade Bait Draws Early Bites, by K. A. Kaufman and G. J. McManus, Oct 26 p 34
What's All this Talk About U.S.-China Trade Boom? by K. A. Kaufman, Oct 19 p 23
World Trade: The Millimeter Monster and Others, by J. M. Beattie, Oct 26 p 35
The Yen Looks to Value-Up—and Japan's Not Happy, by R. A. Guiles, Dec 7 p 72

Forest City Foundries Co.:

Foundries Heat Up for Demand Push, by R. A. Wilson, Oct 5 p 65
Programmable Controller Turns on Foundry, by R. A. Wilson, Oct 5 p 82

Forging Industry

Forging Line Geared to High Production, by W. G. Patton, July 20 p 54
Forging PM Preforms Leads to Part Economy, by B. D. Wakefield, July 27 p 53
The Future of Forging: Help! by J. M. Beattie, Oct 12 p 44
Gatorizing Brings Economy to Forging of Superalloys, July 13 p 84
Tape Control Brings Efficiency to Forging, Aug 17 p 51

Forgings

Forging Line Geared to High Production, by W. G. Patton, July 20 p 54
Forging PM Preforms Leads to Part Economy, by B. D. Wakefield, July 27 p 53
The Future of Forging: Help! by J. M. Beattie, Oct 12 p 44
Gatorizing Brings Economy to Forging of Superalloys, July 13 p 84
Gun Drilling Goes to the Workpiece, Dec 14 p 66
Tape Control Brings Efficiency to Forging, Aug 17 p 51

Forming

Parts "Born-to-Shape" for Economy, by T. C. DuMond, Oct 5 p 79
Simple Test Checks Formability of Steels, Aluminum, Oct 19 p 27

L. B. Foster Co.:

Steel-Tied Panels Make Tracks in Rail Market, Aug 10 p 55

Foto Fabrication Corp.:

Chemical Milling Grabs New Lease on Life, by K. W. Bennett, Oct 12 p 41

Foundry Industry

Acme-Cleveland Adds to European Penetration, July 6 p 26
At the Casters, When it Rains Orders it Pours, by K. W. Bennett, Nov 30 p 39
Foundries Heat Up for Demand Push, by R. A. Wilson, Oct 5 p 65
Gas-Fired Melting Cleans Up Foundries, Oct 26 p 53
Low-Emission Iron Melting System Needs No Coke, Aug 24 p 31
Programmable Controller Turns on Foundry, by R. A. Wilson, Oct 5 p 82
Tired Old Cupolas Rely on Oxygen for a Second Wind, Dec 21 p 52
U.S.-Soviet Trade: Penpals Without Any Pens? by R. A. Wilson, Nov 30 p 42

Fracture (Mechanics)

Brittle Fractures Plague New Pipeline, Aug 3 p 72
Fracture Toughness is No Accident, by R. R. Irving, Oct 19 p 91

France

Continuous Steelmaking Turns a Corner, by G. J. McManus, July 20 p 51
Rothschilds: Buy the Suez, Form a Metals Company, by James Beizer, Dec 21 p 44

Franklin Engines Co.:

Little Planes Lift Aero Market, by K. W. Bennett, Aug 31 p 25

Franklin Institute

Success in R&D Without Deficit Spending, by P. J. Cathey, Nov 30 p 43

Fuels

Blackmail Threatens as Icy Winter Blasts 'Brew Fuel Shortage, Nov 2 p 25
Dry Compound Boosts Efficiency of Fuel Gases, by R. R. Irving, Nov 2 p 54

Furnaces

Gas-Fired Melting Cleans Up Foundries, Oct 26 p 53
Tempering Furnace Sets Pipe Properties, by A. M. Greene, Nov 30 p 55
Vacuum Draws Down Carburizing Time, by T. C. DuMond, Sept 7 p 100
Will SIP Add New Zip to Tired Openhearths? by J. M. Beattie, Aug 31 p 27

Furnaces, Blast

Steelmakers Pin Hopes on Formed Coke, by G. J. McManus, Nov 2 p 52

Furnaces, Electric

Furnace Economics Expand Mini-Mills, by G. J. McManus and K. W. Bennett, Dec 14 p 50
Plate Steels Score Breakthrough in Quality, by R. R. Irving, Oct 12 p 50
Russia's Technology Curtain to be Raised? by J. M. Beattie, Aug 24 p 69

Furnaces, Melting

Will U.S. Mills Swallow SIP? Nov 23 p 63

Furukawa Electric Co.:

Capital Spending Rises in Japan, Plant Sites Shift, Sept 28 p 23

G

GTE Sylvania, Inc.:

Advanced Ceramics Solve Special Problems, by A. M. Greene, Nov 9 p 70
PM Superalloys: Not Low Cost, But Cost Effective, Aug 31 p 16
Spray Powders Protect Wear Surfaces, Nov 9 p 31

Garden Tools

Disston: The Abandoned Baby Gets Fat, by G. J. McManus, Sept 14 p 54

Gas Turbines

Exotic Alloys Come Back with Gas Turbines, by B. D. Wakefield, July 6 p 40
Liquid Layer Aids Jet Blade Bonding, Nov 2 p 55

Gears

Borg-Warner's New Transmissions Shot from Guns, by R. A. Guiles, Nov 7 p 25
Bull Gear Flexing Won't Bully New Drive, by R. A. Wilson, Sept 7 p 101
Detroit Finds New Economies in Gearmaking, by W. G. Patton, Sept 21 p 55
Drive Trains Warm to Cold-Forming, by R. A. Wilson, Aug 17 p 36
Forging Line Geared to High Production, by W. G. Patton, July 20 p 54
Gearmakers Watch the New Developments, by W. G. Patton, Sept 14 p 61

Gemini Corp.:

Automakers' New Sales Road—Rec Vehicles, by R. A. Guiles, Sept 28 p 42

General American Transportation Corp.:

Caution Light Slows RR Recovery, by K. W. Bennett, Aug 3 p 58

General Dynamics Corp.:

The LNG Boom: Up, Up and Then Back Down? by J. M. Beattie, Oct 5 p 71
Norway Builds the Pressure-Vessel Tanker, by R. R. Irving, Aug 17 p 46

General Electric Co.:

Antidumping Laws: Too Tough or Too Easy? Aug 31 p 14
Appliances: Steel Tries to Brake Plastics Trend, by G. J. McManus, Aug 10 p 39
Computer's Cousins Make New Moves, by J. E. Sandford, Sept 21 p 49
Data Networks are a Vital Link for Industry, by A. M. Greene, Sept 21 p 53
Die Casting and Solid State Controls Mix, by B. D. Wakefield, Nov 2 p 56
Drumming Up Some Business at a Machine Tool 'Sale', July 20 p 23
Exotic Alloys Come Back with Gas Turbines, by B. D. Wakefield, July 6 p 40
Foamed Resins Vie for Sheet Metal Jobs, Nov 30 p 58
GE Thinks it Has Found Rich, Untapped Market, by C. J. Suchocki, Oct 19 p 82
Going for the Jugular in Mass Transit? by J. M. Beattie, July 27 p 41
In '68—Anyone for Ferrous Die-casting? Now There Is! by R. A. Wilson, July 27 p 46
Large Lathes Don't Have to be Noisy, by R. A. Wilson, Dec 21 p 48
Lathes Skirmish in Low-Cost Market, by J. E. Sandford, Sept 28 p 38
Lower the Barriers at Home and Abroad, by Gene Beaudet and G. J. McManus, July 13 p 72
MT Show: The Global Scent of Fresh Sales Blood, by K. W. Bennett, Sept 14 p 49
Manufacturers Up Output with Less Workers, by G. J. McManus, Sept 14 p 52
New Technology Triggers Copper Marketing Battle, by James Beizer, Dec 21 p 36
Parts "Born-to-Shape" for Economy, by T. C. DuMond, Oct 5 p 79
Pollution Control: It's Now a Package Deal, by K. W. Bennett, Nov 9 p 60
The Precision Edge of Abrasive Cutting, by J. E. Sandford, Dec 14 p 62
Punch Press Builders Go All the Way with NC, by B. D. Wakefield, Nov 23 p 87
Shutdowns: One Company's Loss is Another's Gain, by G. J. McManus, Nov 23 p 61
Solvent-Free Coatings are Cured by Ultraviolet, Sept 7 p 27
Steel Mills Get Out from Beneath Electrical Sheets, by G. J. McManus, July 6 p 30
Super Tools for Superalloys, by R. A. Wilson, Oct 19 p 96
U.S. Comes in Ninth on Inflation, by G. J. McManus, July 13 p 33
World Machine Tools: Service War? by R. A. Wilson, Aug 3 p 53

General Hose & Coupling Div.:

Powder Coating: 'A Finisher's Finish', by J. J. Obrzut, Nov 16 p 67

General Motors Corp.:

Absenteeism is AWOL at General Motors, by D. N. Williams, July 20 p 38
Attack on GM 'Monopoly' Escalates, by R. A. Guiles, Nov 16 p 59
Auto Emissions: Are Converters Coming for '75? by R. A.

Guiles, Oct 5 p 68
Automakers Bank on Blanks to Cut Scrapage, by G. J. McManus, Aug 24 p 71
Automakers' New Sales Road—Rec Vehicles, by R. A. Guiles, Sept 28 p 42
Automation: Spreading Technology Too Thin? by J. E. Sandford, Dec 7 p 69
Customer Grumblings Crowd Mills into Steel Scrap Changes, by G. J. McManus, Nov 16 p 60
Detroit Escalates Weight War: Plastic Seems Main Weapon, by R. A. Guiles, Oct 26 p 21
Detroit Finds New Economies in Gearmaking, by W. G. Patton, Sept 21 p 55
Detroit's Auto-Parts Diet Struggles, by R. A. Guiles, Oct 19 p 79
The Future Shock in Manufacturing, by J. E. Sandford, Aug 24 p 75
Future Trucks Will Not Automatically be Stick-Shifts, by R. A. Guiles, Oct 5 p 23
GM Has a Better Idea on Emission Testing, by D. N. Williams, July 6 p 20
GM Reincarnates in Off-Road Haulers as Terex, by R. A. Wilson, Aug 10 p 45
GM Strikes: Now You See Them, Now You Don't, Oct 26 p 17
GM Trial Balloon: Will Safety Sell Cars Now? by R. A. Wilson, Sept 14 p 27
GM's Wankel in White's Canton Plant? by G. A. Weimer, Nov 30 p 41
Gases Check Weld Soundness of Auto Parts, Nov 2 p 53
Grease Monkey: Auto Jungle's Dying Species, by R. A. Guiles, Sept 28 p 22
Hey You, the Computer Says Your Bus is Here, by D. N. Williams, July 6 p 20
If Auto Sales Pace Economy—We're Home Free, by D. N. Williams, July 13 p 65
Laser Light Maps Complex Auto Surfaces, Nov 23 p 94
Manufacturers Up Output with Less Workers, by G. J. McManus, Sept 14 p 52
Mobile Lab Puts Pollution Control on Wheels, Aug 3 p 27
Monotony: Labor's Liveliest Issue in '73? by R. A. Guiles, Dec 7 p 77
Nader Blasts Away at His First Hate—the Corvair, by D. N. Williams, July 27 p 23
New Bumpers Bounce Back, Come on Strong, by R. A. Guiles, Sept 21 p 23
New GM Game: Let's Play I've Got a Secret? by R. A. Guiles, Dec 21 p 39
Powder Coating: 'A Finisher's Finish', by J. J. Obrzut, Nov 16 p 67
Simple Test Checks Formability of Steels, Aluminum, Oct 19 p 27
Steel Summary: Rising Demand, Costs Don't Buoy Prices, Nov 9 p 85
Turbine Trucks: Gimmick or Godsend? by R. A. Guiles, Dec 14 p 52
UAW's "Mad at GMAD" Act Runs its Course, Nov 23 p 23
Vega is Cinch to Win 'Recall of the Year' Award, by D. N. Williams, July 13 p 29
When Wankel Puts it All Together—Watch Out, by D. N. Williams, Aug 3 p 61
Windfall Drops Changes in Stainless Lap, by J. M. Beattie and G. J. McManus, July 20 p 35

General Signal Corp.:
Foreign Fluid Power Powers Up, by K. W. Bennett, Nov 23 p 66

General Steel Industries
Going for the Jugular in Mass Transit? by J. M. Beattie, July 27 p 41

Georgia-Pacific Corp.:
Steel-Tied Panels Make Tracks in Rail Market, Aug 10 p 55

Germany
Acme-Cleveland Adds to European Penetration, July 6 p 26
Electron Beams Broaden their Metalworking Use, by Raymond Shah, Sept 28 p 47
Ruhr District Diversity Saved Economy, Says Study, Oct 26 p 23
Ship Hull Section Takes Two Hours to Build, Sept 14 p 68

Gidings & Lewis Machine Tool Co.:
Barter Surfaces as International Trade Tool, by I. G. Black, Nov 2 p 39
Delivery Stretch May Squeeze MT Builders, by R. A. Wilson, Nov 2 p 41
Elephant Tools Fire Machine Tool Climate, by K. W. Bennett, Oct 26 p 36

Gindy Mfg. Co.:
Profit Picture: Pleased as Punch, by J. M. Beattie, Nov 2 p 42

Gleason Works
Detroit Finds New Economies in Gearmaking, by W. G. Patton, Sept 21 p 55
Wankel Machine Tools Up and Running, But Where? by R. A. Wilson, Aug 31 p 15
When Wankel Puts it All Together—Watch Out, by D. N. Williams, Aug 3 p 61

Goodyear Aerospace Div.:
Carbon Brakes to Get Trial on Concorde SST, July 27 p 27

Government
Are Controls Heading U.S. into New Inflation? by K. A. Kaufman, Dec 21 p 21
The Best Things in Life Cost Something, by Gene Beaudet, Sept 14 p 5
Cohen Strongly Defends ADR, 7 Pct Tax Credit, by K. A. Kaufman, Oct 5 p 21
Congress or No—President Will Cut Federal Spending, by K. A. Kaufman, Oct 26 p 19
Government Deals Copper Companies Dual Blow, by James Beizer, Sept 28 p 63
Is a New NEP Shaping Up? by J. D. Baxter, Nov 16 p 61
Justice Wants Suit Against Steel Quotas Put on a Scrap Heap, by K. A. Kaufman, Sept 14 p 25
Meany-Nixon: Next White House Marriage? Nov 16 p 17
New Workmen's Comp: Campaign Bait? by J. M. Beattie, Aug 10 p 44
Nixocrats Nix Interest Controls for Present, by K. A. Kaufman, Nov 2 p 21
Nixon and Congress: Four-Year Money Fight? by K. A. Kaufman, Nov 16 p 55
Nixon Has 'Positive Enthusiasm', Steel Leaders Believe, by H. R. Neal and G. J. McManus, Nov 16 p 57
Nixon Puts the Axe to Federal Spending, by K. A. Kaufman, Oct 19 p 23
Nixon's Cabinet: New Faces and Musical Chairs, by K. A. Kaufman, Dec 14 p 19
Now, About the Next 'Four More Years' by Gene Beaudet, Nov 16 p 5
Reubin—Have One on Us, by Gene Beaudet, July 20 p 5
Sometime, After the Politics, there Will be a Tax Increase, by K. A. Kaufman, July 6 p 16
White House Sees Chance for Budget Lid, by K. A. Kaufman, Sept 7 p 23
Why Don't They Lay Off the Sauce? by Gene Beaudet, July 6 p 5

W. R. Grace & Co.:
Here Comes the Old Money Game—and U.S. Dollar is 'It', by K. W. Bennett, Dec 7 p 72

Gray & Ductile Iron Founders Society
Foundries Heat Up for Demand Push, by R. A. Wilson, Oct 5 p 65

Great Lakes
Great Lakes Shipping: Damn the Ice, Full Speed Ahead, by R. A. Guiles, Dec 14 p 53

Gregg Iron Foundry
Foundries Heat Up for Demand Push, by R. A. Wilson, Oct 5 p 65

Grinding
Detroit Finds New Economies in Gearmaking, by W. G. Patton, Sept 21 p 55
Diamond Wheel Grinds "Impossible" Drill Materials, July 27 p 57
Gearmakers Watch the New Developments, by W. G. Patton, Sept 14 p 61
The Precision Edge of Abrasive Cutting, by J. E. Sandford, Dec 14 p 62

Group LeNickel-Pennaroya-Mokta
Rothschilds: Buy the Suez, Form a Metals Company, by James Beizer, Dec 21 p 44

Grumman Aerospace Corp.:
Electron Beams Broaden their Metalworking Use, by Raymond Shah, Sept 28 p 47

Gulf Oil Corp.:
New Entries Enrich Coalgas Interest, by G. J. McManus, July 6 p 28
Shutdowns: One Company's Loss is Another's Gain, by G. J. McManus, Nov 23 p 61

Gulf & Western Industries, Inc.:
Latest PC Uses its Memory to Cut Cost Per Function, Oct 19 p 98

H

H.E.S. Machine Tool, Inc.:
Lathes Skirmish in Low-Cost Market, by J. E. Sandford, Sept 28 p 38
Tool Show's Second Week Draws Fat Wallets, by K. W. Bennett, Sept 21 p 47

Hagwood & Daniels, Inc.:
Bargain Plant Leases Disappear, by K. W. Bennett, July 13 p 66

Hamilton Metal Science
Do Your Thing—But Organize to Do it Well, by P. J. Cathey, Aug 17 p 41

Hamilton Standard Div.:
Laser Welding Comes Back to Life, Oct 12 p 55
Lasers Challenge Electron Beam Welding in Speed, Quality, by B. D. Wakefield, Dec 7 p 88

Hamilton Watch Co.:
Do Your Thing—but Organize to Do it Well, by P. J. Cathey, Aug 17 p 41

Hankison Corp.:
U.S. Comes in Ninth on Inflation, by G. J. McManus, July 13 p 33

Hanna Mining Co.:
Cleveland Cliffs Follows Hanna in Price Increase, Dec 21 p 39

Hannock Appraisal Co.:
Bargain Plant Leases Disappear, by K. W. Bennett, July 13 p 66

Harris Trust and Savings Bank
Will Success Spoil Inflation Controls? by K. W. Bennett, Dec 21 p 42

Harvard University
Monotony: Labor's Liveliest Issue in '73? by R. A. Guiles, Dec 7 p 77

Haulers
GM Reincarnates in Off-Road Haulers as Terex, by R. A. Wilson, Aug 10 p 45

Hayes-Albion Corp.:
At the Casters, When it Rains Orders it Pours, by K. W. Bennett, Nov 30 p 39

C. I. Hayes, Inc.:
Vacuum Draws Down Carburizing Time, by T. C. DuMond, Sept 7 p 100

Health Programs
The Book on OSHA Rules: Do it Anyway, by J. M. Beattie, Oct 19 p 17
Industry Beware—OSHA is on the Warpath Once More, Sept 7 p 21
Multi-Plant Firms Have Bigger OSHA Headaches, by R. A. Guiles, Oct 12 p 45
OSHA Lays Down the Law on Private Court Suits, Oct 12 p 23
OSHA May Certify Private Labs to OK Equipment, by R. A. Guiles, Sept 21 p 25
OSHA: No Pay for Small Fry? by K. A. Kaufman, Aug 17 p 37
OSHA Proposal Seeks State Inspection Continuance, Oct 26 p 17
OSHA Pushes On But States Lag in Setting Job Safety Plans, Nov 30 p 21
Productivity Gains—and OSHA—Spur Diecasting, by K. W. Bennett, Oct 26 p 37
The Race is Over, but Compensation is Held Up, by J. M. Beattie, July 13 p 68
Worker Benefits: Business Tabbed Key to Reform, Dec 14 p 17
Workmen's Comp and the Friday Flash, by J. M. Beattie, July 13 p 68

Heat Exchangers
Tubes Expanded by Explosives, Aug 3 p 75

Heat Transfer
Ceramic Coating System Controls Heat Flow, Sept 14 p 66

Herman Corp.:
Programmable Controller Turns on Foundry, by R. A. Wilson, Oct 5 p 82

Hesston Corp.:
Farm Machinery Set to Reap a Big '73, by K. W. Bennett, Nov 16 p 58

Hindustan Machine Tools Ltd.:
Machine Tool Exports from India Inch Up but Bicycles Boom, Oct 26 p 23

Hiroshima Technical Institute
Tubes Expanded by Explosives, Aug 3 p 75

Hitachi, Ltd.:
Capital Spending Rises in Japan, Plant Sites Shift, Sept 28 p 23
Japan Renews Push into U.S. Plants, Hitachi is Latest, by I. G. Black, Sept 28 p 39

Hitachi Metals, Ltd.:
Japan Renews Push into U.S. Plants, Hitachi is Latest, by I. G. Black, Sept 28 p 39

Hitachi Seiki Co. Ltd.:
See Also: Seiki Corp.

Hole Making
EDM Puts Precision Holes in Hard Metals, by W. G. Patton, Nov 30 p 56

Holography
Laser Light Maps Complex Auto Surfaces, Nov 23 p 94

Holo-Krome Co.:
An Answer to 'How Tight is Tight?' by B. D. Wakefield, July 13 p 82

Honda Motor Co.:
Ford Mulls Honda Tie-UP, Eyes New "Clean" Engine, Nov 9 p 29

Honeycomb Core
See: Sandwich Construction

Honeywell, Inc.:
It Takes Billions to Catch a Thief, by K. W. Bennett, Aug 17 p 38

Honeywell Information Systems, Inc.:
Data Networks are a Vital Link for Industry, by A. M. Greene, Sept 21 p 53
Productivity: Can 'New Carrot' be an Old One—Money? by P. J. Cathey, Sept 21 p 51

Hoogovens (Netherlands)
Computer Hierarchy Governs Dutch Steel, by A. M. Greene, July 27 p 56

Houdaille Industries, Inc.:
Delivery Stretch May Squeeze MT Builders, by R. A. Wilson, Nov 2 p 41
Machine Tools: Getting Ready for More Show (Biz), by R. A. Wilson, Aug 31 p 26
Punch Press Builders Go All the Way with NC, by B. D. Wakefield, Nov 23 p 87
World Machine Tools: Service War? by R. A. Wilson, Aug 3 p 53

Housing
See: Building Construction

Howmet Corp.:
Aluminum Industry's Convalescence Has Six Months to Go, by James Beizer, July 27 p 69
Aluminum: Only the Pricing is Still Sick, by James Beizer, Oct 26 p 40

Hydro-Line Mfg. Co.:
Foreign Fluid Power Powers Up, by K. W. Bennett, Nov 23 p 66

Hypertherm, Inc.:
Water-Table Traps Fumes and Noise in Torch Cutting, by J. J. Obrzut, Sept 14 p 67

IBW Environmental Systems Corp.:
Vertical Welding Goes into Orbit, by R. R. Irving, Oct 26 p 50

ICD Group, Inc.:
Barter Surfaces as International Trade Tool, by I. G. Black, Nov 2 p 39

IRSID (France)
Continuous Steelmaking Turns a Corner, by G. J. McManus, July 20 p 51

Ice Breakers
Great Lakes Shipping: Damn the Ice, Full Speed Ahead, by R. A. Guiles, Dec 14 p 53

Illinois Tool Works Inc.:
Multi-Plant Firms Have Bigger OSHA Headaches, by R. A. Guiles, Oct 12 p 45

Imperial Metal Finishing Co.:
Powder Coating: 'A Finisher's Finish', by J. J. Obrzut, Nov 16 p 67

Imperial Smelting Corp.:
The Future Shock in Manufacturing, by J. E. Sandford, Aug 24 p 75

Incinerators
Burning Wastes Test Mettle of Materials, by T. C. DuMond, Aug 10 p 52

India
Machine Tool Exports from India Inch Up but Bicycles Boom, Oct 26 p 23

Indochina
Thoughts of Peace in Indochina, by Gene Beaudet, Nov 2 p 5

Industrial Briefs, Name Changes, Mergers, Acquisitions, Contracts

Industrial Development Authority
Ireland: The New Gateway to the Common Market? by J. M. Beattie, Dec 21 p 23

Industrial Fasteners Institute
Metric System Millimetres its Way to Adoption, by J. J. Obrzut, July 13 p 62

Industrial Relations
Absenteeism is AWOL at General Motors, by D. N. Williams, July 20 p 38
How to Manage People Problems, by J. M. Beattie, Sept 14 p 57
Job Tests: A Testy Question About Validity, by K. W. Bennett, Sept 28 p 41
Monotony: Labor's Liveliest Issue in '73? by R. A. Guiles, Dec 7 p 77
Motivation: What You Want is What You Get, by R. A. Guiles, Nov 2 p 46
Nixon Doesn't Have a Strike Against Him in '72, by K. A. Kaufman, Aug 3 p 25
Public Image of Business Continues to Sag, by K. W. Bennett, Nov 9 p 52
Quality Sagging? Workers Depressed? Try these Ideas, Dec 7 p 29
Steel Slices Grip Time to a Nub, by G. J. McManus, Aug 17 p 40
Steelworkers: Productivity Push Gets Pushed Around, Nov 30 p 17
You're Hired, but First this Little Test? by R. A. Guiles, Oct 5 p 70

Industrial Security
It Takes Billions to Catch a Thief, by K. W. Bennett, Aug 17 p 38
New GM Game: Let's Play I've Got a Secret? by R. A. Guiles, Dec 21 p 39
Treasury Asks for Power to Stem Cargo Thievery, by K. A. Kaufman, Aug 10 p 23

Industrial Union of Marine and Shipbuilding Workers of America
Steel Odyssey: Grant a Raise, Take a Strike, Aug 10 p 21

Industry
Where Are You When I Need You? by Gene Beaudet, Sept 28 p 5

Ingersoll Milling Machine Co.:
Air Transports Workpieces to Machinery, July 27 p 59
Elephant Tools Fire Machine Tool Climate, by K. W. Bennett, Oct 26 p 36
The Precision Edge of Abrasive Cutting, by J. E. Sandford, Dec 14 p 62

Ingersoll-Rand Co.:
DNC Lines Link Cutting to New Future, by J. E. Sandford, Oct 26 p 46
The Future Shock in Manufacturing, by J. E. Sandford, Aug 24 p 75

Ingots
Armco Dismantles Openhearths, Yet Buys Ingots, Oct 19 p 129

Inland-Ryerson Construction Products Co.:
Metals Builders Build a Boom, by K. W. Bennett, Aug 24 p 65

Inland Steel Co.:
Ecology's Latest Sacrifice: Burned No. 2 Bundles? by K. W. Bennett, Aug 31 p 28
Zinc-Rich Coatings Enroute for Auto, Appliance Use, by K. W. Bennett, Oct 12 p 42

Inquiries, Keyed Numbers for Reader Information Service

Inspiration Consolidated Copper Co.:
Copper Company Balances Ecology with Economy, by James Beizer, Nov 2 p 49
New Technology Triggers Copper Marketing Battle, by James Beizer, Dec 21 p 36
Politics: Strange Bedfellows Mate, by K. A. Kaufman, James Beizer, J. M. Beattie and G. J. McManus, July 20 p 33

Institute of Gas Technology
New Entries Enrich Coalgas Interest, by G. J. McManus, July 6 p 28

Institute of Scrap Iron & Steel, Inc.:
Figuring How Much Export May Improve is Difficult, Aug 24 p 118
RRs vs Recyclers: SCRAP for Scrap's Sake, by C. J. Suchocki, July 27 p 25
Scrap, Ecologists Get ICC to Delay Scrap Freight Hike, by K. A. Kaufman, Nov 16 p 19

Interdata Corp.:
Data Networks are a Vital Link to Industry, by A. M. Greene, Sept 21 p 53

Interlake, Inc.:
Controversial 'Buy American' Splits House of Steel, by K. A. Kaufman, Oct 5 p 69
The Midi-Mill: It's a Different Ball Game, by G. J. McManus, Sept 7 p 95

International Basic Economy Corp.:
Foreign Fluid Power Powers Up, by K. W. Bennett, Nov 23 p 66

International Business Machines Corp.:
Computer-Memory Technology Takes a Bigger Byte, by K. W. Bennett, Aug 10 p 43
How Can Steel Use Virtual Storage in its Computers? Aug 31 p 39

International Copper Research Assn.:
Copper Alloy Gives a Damp, by T. C. DuMond, Nov 9 p 68
Future Gleams for Copper Die Castings, by T. C. DuMond, Dec 21 p 50
Plastic Coating Gives Bright Future to Copper, Nov 16 p 25

International Die Casting Congress
Future Gleams for Copper Die Castings, by T. C. DuMond, Dec 21 p 50

International Harvester Co.:
Computer Harmonizing Cuts Steel Costs, by B. D. Wakefield, Aug 31 p 34
Exotic Alloys Come Back with Gas Turbines, by B. D. Wakefield, July 6 p 40
Farm Equipment: The Lush Years Return, by K. W. Bennett, July 27 p 44
Farm Machinery Set to Reap a Big '73, by K. W. Bennett, Nov 16 p 58
Metric System Millimetres its Way to Adoption, by J. J. Obrzut, July 13 p 72
Turbine Trucks: Gimmick or Godsend? by R. A. Guiles, Dec 14 p 52

International Iron & Steel Institute
World Steelmen Fret About Overcapacity Ulcer, by Gene Beaudet, Oct 19 p 77

International Nickel Co.:
After Nickel Labor Settles, Can a Price Hike be Far Behind? by James Beizer, July 20 p 37
Bumpers Reflect Bright '73 for Platers, by J. J. Obrzut, Dec 14 p 68
Canada's LNG Line is No Pipe Dream, Oct 12 p 53
Canadian Labor Settlement: Not Only Nickels and Dimes, by J. M. Beattie, July 13 p 97
In '73, Nickel Prices to Be Firm as Oversupply Fades, by James Beizer, Oct 26 p 69
Nickel's Recovery Sets Example for Metals Companies, by James Beizer, Nov 16 p 95
Seashore Test Lot Has No Mercy on Metals, by J. J. Obrzut, Oct 19 p 94
Windfall Drops Changes in Stainless Lap, by J. M. Beattie and G. J. McManus, July 20 p 35

International Relations
As You Say, Mr. Nixon, "Seize the Day!" by Gene Beaudet, Nov 30 p 3
Barter Surfaces as International Trade Tool, by I. G. Black, Nov 2 p 39
Changing the Almighty Dollar, by G. J. McManus, Oct 26 p 34
Drumming Up Some Business at a Machine Tool 'Sale', July 20 p 23
Ford Will Build in Taiwan—Speculation Now Shifts to Spain, Dec 7 p 27
Ireland: The New Gateway to the Common Market? by J. M. Beattie, Dec 21 p 23
Lockheed's Future Boosted by British TriStar Order, Aug 17 p 24
Mexico's Growth—Building Solidly, But Fast, by K. W. Bennett, Nov 23 p 69
Mr. Shultz, Our Hat's Off to You! by Gene Beaudet, Oct 5 p 5
Multinationalism: Industry and Labor Go Begging, by R. A. Guiles, Nov 2 p 19
Rothschilds: Buy the Suez, Form a Metals Company, by James Beizer, Dec 21 p 44
U.S. International Money Proposals Get Foreign Nod, by K. A. Kaufman, Oct 5 p 21
World Steelmen Fret About Overcapacity Ulcer, by Gene Beaudet, Oct 19 p 77
World Trade: The Millimeter Monster and Others, by J. M. Beattie, Oct 26 p 35

International Tin Council
Spot Tin Prices: Are They Really on the Up and Up? by James Beizer, Sept 14 p 89

International Union of Electrical Workers
IUE: More than a Concern Over 'Dumping Nixon', by C. J. Suchocki, July 6 p 15
Monotony: Labor's Liveliest Issue in '73? by R. A. Guiles, Dec 7 p 77

International Utilities Corp.:
Pollution Control: It's Now a Package Deal, by K. W. Bennett, Nov 9 p 60

International—Weekly Reports (See Also Subject Classification, Foreign Trade, Individual Countries)

Interprovincial Pipe Line Co.:
Data Networks are a Vital Link for Industry, by A. M. Greene, Sept 21 p 53

Interrad Corp.:
Powder Coating: 'A Finisher's Finish', by J. J. Obrzut, Nov 16 p 67

Interstate Commerce Commission
Scrap, Ecologists Get ICC to Delay Scrap Freight Hike Rate, by K. A. Kaufman, Nov 16 p 19

Iowa Malleable Iron Co.:
At the Casters, When it Rains Orders it Pours, by K. W. Bennett, Nov 30 p 39

Ireland
Ireland: The New Gateway to the Common Market? by J. M. Beattie, Dec 21 p 23

Iron
Low-Emission Iron Melting System Needs No Coke, Aug 24 p 31

Iron and Steel Institute
Nixon Has 'Positive Enthusiasm', Steel Leaders Believe, by H. R. Neal and G. J. McManus, Nov 16 p 57

Iron Ore
Cleveland Cliffs Follows Hanna in Price Increase, Dec 21 p 39

Italy
Labor Ferment Imperils Italy's Economic Progress, Aug 17 p 24

J

Japan
American Robots May Invade Soviet Union—Via Japan, Nov 23 p 29
Capital Spending Rises in Japan, Plant Sites Shift, Sept 28 p 23
Copper Cartels? In Any Language it's a Loser, by James Beizer, Dec 21 p 41
'Do it Yourself' Russian Trade, by D. N. Williams, July 6 p 27
Ford Mulls Honda Tie-Up, Eyes New "Clean" Engine, Nov 9 p 29
Here Comes the Old Money Game —and U.S. Dollar is 'It', by K. W. Bennett, Dec 7 p 72
Japan Gets Ready to Trigger Atomic Industrial Boom, Oct 12 p 29
Japan Renews Push into U.S. Plants, Hitachi is Latest, by I. G. Black, Sept 28 p 39
Japanese Airline Pushes Lockheed Toward Breakeven, Nov 9 p 29
Multinationalism: Industry and Labor Go Begging, by R. A. Guiles, Nov 2 p 19
Sheet Processing Done Continuously on New Line, Dec 21 p 25
Tubes Expanded by Explosives, Aug 3 p 75
World Machine Tools: Service War? by R. A. Wilson, Aug 3 p 53
The Yen Looks to Value-Up—and Japan's Not Happy, by R. A. Guiles, Dec 7 p 72

Japan Air Lines
Japanese Airline Pushes Lockheed Toward Breakeven, Nov 9 p 29

Jawbone Pipeline
Brittle Fractures Plague New Pipeline, Aug 3 p 72

Jergens, Inc.:
Skills Attrition Stifles T&D Shop Revival, by R. A. Wilson, Sept 28 p 36

Jones & Lamson Div.:
Getting Lathes Turning with the Super Tool, by R. A. Wilson, July 20 p 47
Packaging Adds Cost Appeal to NC, by J. E. Sandford, July 20 p 52

Jones & Laughlin Steel Corp.:
Clean Up at Armco and J&L Tagged "Unique" and "Biggest", Nov 30 p 21
Holding Companies are Losing their Grip, by G. J. McManus, Aug 3 p 56
Shutdowns: One Company's Loss is Another's Gain, by G. J. McManus, Nov 23 p 61
Steel Hikes to be Scattered Throughout '73, by G. J. McManus, Sept 21 p 45

Joslyn Mfg. and Supply Co.:
Stainless Bars Put to Screw Machine Test, by B. D. Wakefield, Nov 23 p 90

K

K & D Co.:
Skills Attrition Stifles T&D Shop Revival, by R. A. Wilson, Sept 28 p 36

Kaiser Aluminum & Chemical Corp.:
Aluminum Has Trouble Making Prices Stick, by James Beizer, Nov 16 p 95
Aluminum Industry's Convalescence Has Six Months to Go, by James Beizer, July 27 p 69
Aluminum: Only the Pricing is Still Sick, by James Beizer, Oct 26 p 40
Soviety Technology: Is this the Start of Something More? by James Beizer, Aug 31 p 45

Kaiser Trading Co.:
Barter Surfaces as International Trade Tool, by I. G. Black, Nov 2 p 39

Kama River
U.S.-Soviet Trade: Penpals Without Any Pens? by R. A. Wilson, Nov 30 p 42
VIP Soviet Trade Bait Draws Early Bites, by K. A. Kaufman and G. J. McManus, Oct 26 p 34

Robert Kaufman & Associates
Diecasting Equipment Orders Begin to Boom, by K. W. Bennett, Oct 26 p 37

Kaydon Bearing Co.:
The Precision Edge of Abrasive Cutting, by J. E. Sandford, Dec 14 p 62

Kawasaki Heavy Industries, Ltd.:
Capital Spending Rises in Japan, Plant Sites Shift, Sept 28 p 23

Kearney & Trecker Corp.:
Delivery Stretch May Squeeze MT Builders, by R. A. Wilson, Nov 2 p 41
MT Show: The Global Scent of Fresh Sales Blood, by K. W. Bennett, Sept 14 p 49

M. W. Kellogg Co.:
Synthetic Gas: It's a Natural, by K. W. Bennett, Aug 10 p 42

Joseph Kelner
Product Liability: Industry's Newest Tax? by I. G. Black, Aug 31 p 23

Kennametal, Inc.:
Are Price Controls Out of Control? by G. J. McManus, Dec 14 p 48

Kennecott Copper Corp.:
Allende Fixes Blame—On Everyone Else, by James Beizer, Dec 14 p 54
Chile Copper Grab: An International Affair? by James Beizer, Sept 14 p 89
Chile and Kennecott Both Claim Victory but Cerro Gets Paid, by James Beizer, Dec 7 p 71
Chilean Tribunal—Hardly a Cent for Kennecott, Anaconda, by James Beizer, Aug 24 p 70
EPA Environment Management Blasted as 'Inadequate', by James Beizer, Dec 14 p 23
EPA Foils Probe of Smelter Rules, by James Beizer, Sept 7 p 89
Finding the Key to Board Interlocks, Dec 7 p 73
Government Deals Copper Companies Dual Blow, by James Beizer, Sept 28 p 63
New Technology Triggers Copper Marketing Battle, by James Beizer, Dec 21 p 36
This Means War—Legal War—Between Kennecott and Chile, by James Beizer, Oct 12 p 69

Kentucky Electric Steel Co.:
Furnace Economics Expand Mini-Mills, by G. J. McManus and K. W. Bennett, Dec 14 p 50

Franklin Key, Inc.:
Success in R&D Without Deficit Spending, by P. J. Cathey, Nov 30 p 43

Keystone Consolidated Industries
The Midi-Mill: It's a Different Ball Game, by G. J. McManus, Sept 7 p 95

Keystone Steel & Wire Div.:
The Midi-Mill: It's a Different Ball Game, by G. J. McManus, Sept 7 p 95

Killion Extruders, Inc.:
Plastic Metals Offer Flexibility in Tooling, Aug 17 p 52

Koehring HPM Div.:
Diecasting Equipment Orders Begin to Boom, by K. W. Bennett, Oct 26 p 37

Koppers Co., Inc.:
New Entries Enrich Coalgas Interest, by G. J. McManus, July 6 p 28

Kozma Corp.:
Diecasting Equipment Orders Begin to Boom, by K. W. Bennett, Oct 26 p 37

Kux Machine Div.:
Productivity Gains—and OSHA—Spur Diecasting, by K. W. Bennett, Oct 26 p 37

Kvaerner Industrier Group (Norway)
Norway Builds the Pressure-Vessel Tanker, by R. R. Irving, Aug 17 p 46

L

L & L Associates
Pinpoint Problems, Solve Them, Through Work Scheduling, Dec 21 p 43

LTV Corp.:
Holding Companies are Losing their Grip, by G. J. McManus, Aug 3 p 56

Labor
Absenteeism is AWOL at General Motors, by D. N. Williams, July 20 p 38
After Nickel Labor Settles, Can a Price Hike be Far Behind? by James Beizer, July 20 p 37
Beer Union to Teamsters: 'Have One With Us!' Aug 3 p 5
British Labor: Does Lords' Know What's Happening? Aug 3 p 29
Building Trades: Roundtable Planes Some Rough Edges, Oct 12 p 23
Construction Wages are Under Control? by G. J. McManus, Oct 12 p 46
DOL Sets Reelection Terms While Boyle Sweats Appeal, July 13 p 25
The Elephant Tip-Toes Through Labor's Rose Garden, Aug 31 p 13
GM Strikes: Now You See Them, Now You Don't, Oct 26 p 17
Guardian Angels Descend on UAW Local Coffers, July 13 p 25
High Court Rule Gives Break to Strikebreakers, Dec 14 p 17
Labor Day: Only Politicians Didn't Take a Vacation, Sept 14 p 23
Labor Ferment Imperils Italy's Economic Progress, Aug 17 p 24
Labor Splinter Groups: A Thorn in Meany's Side? Sept 7 p 21
Laborites for McGovern Close Their Ranks, Aug 24 p 21
Lifting Low-Wage Limit Raises Pay Boost Chances, Aug 3 p 5
McGovern Woos Labor Support with Base-Wage Voting, by K. A. Kaufman, July 27 p 43
Meany, McGovern and the Time for Decision, by C. J. Suchocki, July 20 p 17
Meany-Nixon: Next White House Marriage? Nov 16 p 17
Meany's Polity: A Curse on Both Your Houses, July 27 p 19
Monotony: Labor's Liveliest Issue in '73? by R. A. Guiles, Dec 7 p 77
Mr. Brennan, Look at It This Way, by Gene Beaudet, Dec 7 p 3
Multinationalism: Industry and Labor Go Begging, by R. A. Guiles, Nov 2 p 19
New Workmen's Comp: Campaign Bait? by J. M. Beattie, Aug 10 p 44
Nixon Doesn't Have a Strike Against Him in '72, by K. A. Kaufman, Aug 3 p 25
Nixon Plucks 'Hard Hat' for His Labor Man, Dec 7 p 21
Now, At this Inconvenient Time —Strikes Hit GM, by R. A. Guiles, Nov 2 p 40
Picket Line Support No Cause to Fire, High Court Says, by K. A. Kaufman, Nov 16 p 19
The Race is Over, but Compensation Payoff is Held Up, by J. M. Beattie, July 13 p 68
Roundtable Casts Critical Eye at Hiring Halls, Aug 17 p 19
Safety: You Can't Always Go by the Book, Oct 19 p 21
Steel Odyssey: Grant a Raise, Take a Strike, Aug 10 p 21
Steel Slices Gripe Time to a Nub, by G. J. McManus, Aug 17 p 40
Steelworkers: Productivity Push Gets Pushed Around, Nov 30 p 17
UAW Scales Olympian Heights in Car-Pricing, Sept 21 p 19
UAW's "Mad at GMAD" Act Runs its Course, Nov 23 p 23
UMW Election: A Good Chance for Reform, by C. J. Suchocki and G. A. Weimer, Dec 21 p 19

USWA: Politics Upstages Issues, by G. J. McManus, Sept 28 p 40
USWA Stands by George—as In Meany, by George! Aug 10 p 21
Wage Gains: A Far Cry from the Year Past, Nov 9 p 23
Wages: All Are Created Equal but Not in Pay, Aug 17 p 19
Woodcock Wracks Automakers Over Profiteering, Oct 5 p 19
Worker Benefits: Business Tabbed Key to Reform, Dec 14 p 17

Laclede Steel Co.:
Laclede Rollback: Pricing's Guinea Pig? by G. J. McManus, July 27 p 47
The Midi-Mill: It's a Different Ball Game, by G. J. McManus, Sept 7 p 95
Price Relief—Can Steel Dent Commission's Wall? by G. J. McManus, Aug 24 p 67
Steel Summary: Price Hikes and Profits Problems, Dec 7 p 117
Why Not Try a Profit Increase Instead of a Price Increase? by G. J. McManus, Aug 17 p 37

F. Joseph Lamb Co.:
Borg-Warner's New Transmissions Shot from Guns, by R. A. Guiles, Nov 7 p 25

Eugene A. Lange
Fracture Toughness is No Accident, by R. R. Irving, Oct 19 p 91

Charles E. Larson & Sons, Inc.:
The Future of Forging: Help! by J. M. Beatttie, Oct 12 p 44

Lasers
Laser Light Maps Complex Auto Surfaces, Nov 23 p 94
Laser Welding Comes Back to Life, Oct 12 p 55
Lasers Challenge Electron Beam Welding in Speed, Quality, by B. D. Wakefield, Dec 7 p 88

Lathes
Getting Lathes Turning with the Super Tool, by R. A. Wilson, July 20 p 47
Large Lathes Don't Have to be Noisy, by R. A. Wilson, Dec 21 p 48
Lathes Skirmish in Low-Cost Market, by J. E. Sandford, Sept 28 p 38
Low-Cost Lathe Fits Heavyweight Image, by J. E. Sandford, July 13 p 86
MT Show: The Global Scent of Fresh Sales Blood, by K. W. Bennett, Sept 14 p 49
Packaging Adds Cost Appeal to NC, by J. E. Sandford, July 20 p 52
Small Builder Rides the 'Edge of Accuracy', by J. E. Sandford, July 27 p 60
Soft-Wired Control Builder Sets Sight on Lathe Market, by B. D. Wakefield, Sept 7 p 102
Tool Show's Second Week Draws Fat Wallets, by K. W. Bennett, Sept 21 p 47
Warner & Swasey Joins Control Builders Club, by R. A. Wilson, Sept 7 p 88
World Machine Tools: Service War? by R. A. Wilson, Aug 3 p 53

Latin America Iron and Steel Institute
Brazil's Billion-Dollar Steel Baby, by G. J. McManus, Nov 2 p 44

Latrobe Steel Co.:
Cast-to-Shape Parts Require 50 Pct Less Secondary Machining, by B. D. Wakefield, Oct 5 p 85

Law and Legal
Court Slaps EPA and Lets Smelters Off Pollution Hook, by James Beizer, Dec 14 p 83
High Court Rule Gives Break to Strikebreakers, Dec 14 p 17
OSHA Lays Down the Law on Private Court Suits, Oct 12 p 23
Product Liability: Industry's Newest Tax? by I. G. Black, Aug 31 p 23
Products Liability: Now it's Let the Seller Beware, by J. M. Beattie, Oct 12 p 47
This Means War—Legal War—Between Kennecott and Chile, by James Beizer, Oct 12 p 69
Treasury Investigates Charge of Mexican Plate Dumping, Oct 12 p 67

Lead
Up the Down Stairs Again for Lead and Brass Prices, by James Beizer, Sept 7 p 90

Lear Siegler, Inc.:
Gearmakers Watch the New Developments, by W. G. Patton, Sept 14 p 61

LeBlond, Inc.:
Lathes Skirmish in Low-Cost Market, by J. E. Sandford, Sept 28 p 38
Tool Show's Second Week Draws Fat Wallets, by K. W. Bennett, Sept 21 p 47

Lectromelt Corp.:
Furnace Economics Expand Mini-Mills, by G. J. McManus and K. W. Bennett, Dec 14 p 50

Leeds & Northrup Co.:
Continuous Casting Needs Solid Instrumentation Support, Oct 12 p 56

Legislation
Attack on GM 'Monopoly' Escalates, by R. A. Guiles, Nov 16 p 59
Can it Be—A New Outlook in Ways and Means Committee? by K. A. Kaufman, Nov 30 p 19
Computer Patent Battle Goes from Court to Congress, by K. A. Kaufman, Nov 30 p 45
Congress Sends Tough Clean-Stream Measure to Nixon, by K. A. Kaufman, Oct 12 p 25
Controversial 'Buy American' Clause Splits House of Steel, by K. A. Kaufman, Oct 5 p 69
Digging Deeper Into Strip Mining Bills, by K. A. Kaufman, July 13 p 27
Fight Over Boxcars Keeps on Rollin' Along, by K. A. Kaufman, Aug 17 p 21
House Cool to Embargo on Rhodesian Chrome, by K. A. Kaufman, Aug 24 p 23
Lamebrain Hiring Thwarts Handicapped, by K. W. Bennett, July 20 p 36
Metric Conversion: Inching Closer Toward Reality? by K. A. Kaufman, Aug 17 p 21
Nixon and Congress: Four-Year Money Fight? by K. A. Kaufman, Nov 16 p 55
Pension Bill Tide Hits High Water-Mark in Congress, by K. A. Kaufman, Sept 28 p 37
'Regional' Foreign Dumping Will be One Target of New Bill, by K. A. Kaufman, Nov 23 p 25
Senate Passes Bill to Trim Restricted Export List, by K. A. Kaufman, Aug 10 p 23
Thought Dead, Buy American Specialty Steel Bill Lives, by K. A. Kaufman, Oct 19 p 81
Treasury Asks for Power to Stem Cargo Thievery, by K. A. Kaufman, Aug 10 p 23
U.S. Industries Facing a New 'Hart' Brake? by K. A. Kaufman, Aug 3 p 57
VIP Soviet Trade Bait Draws Early Bites, by K. A. Kaufman and G. J. McManus, Oct 26 p 34
White House Sees Chance for Budget Lid, by K. A. Kaufman, Sept 7 p 23
Who Pays for Recall Defect Repair? VW Case May Decide, by R. A. Guiles, Dec 7 p 25

Lester Engineering Co.:
Die Casting and Solid State Controls Mix, by B. D. Wakefield, Nov 2 p 56

Letter to the Editor, Information Feedback from Readers

Charles C. Lewis Co.:
Custom-Cutting Creates Big Saw Market in U.S. Service Centers, by B. D. Wakefield, Oct 26 p 51

Leybold-Heraeus GmbH & Co.:
Electron Beams Broaden their Metalworking Use, by Raymond Shah, Sept 28 p 47

Leytess Metals & Chemicals Corp.:
Auto Emission Uses Will Make Platinum Even More Precious, by James Beizer, Nov 23 p 115

Linde Div.:
Plasma Torches Seek New Role in Vacuum Melting, Sept 14 p 64

Liquified Natural Gas
See: Natural Gas

Lockheed Aircraft Corp.:
Japanese Airline Pushes Lockheed Toward Breakeven, Nov 9 p 29
Lockheed's Future Boosted by British TriStar Order, Aug 17 p 24

Lockheed Missiles and Space Co.:
The Future Shock in Manufacturing, by J. E. Sandford, Aug 24 p 75

Loctite Corp.:
Sealing Method Expands Usage of PM, Die Cast Parts, Nov 30 p 57

Lodge & Shipley Co.:
Getting Lathes Turning with the Super Tool, by R. A. Wilson, July 20 p 47
Lathes Skirmish in Low-Cost Market, by J. E. Sandford, Sept 28 p 38
MT Show: The Global Scent of Fresh Sales Blood, by K. W. Bennett, Sept 14 p 49
NC Bar Chucker: It's an Index to Productivity, by R. A. Wilson, July 27 p 55

Lone Star Steel Co.:
The Midi-Mill: It's a Different Ball Game, by G. J. McManus, Sept 7 p 95
Steel Summary: Price Hikes and Profits Problems, Dec 7 p 117

Long Mfg. Co.:
Farm Machinery Set to Reap a Big '73, by K. W. Bennett, Nov 16 p 58

Los Angeles
Brittle Fractures Plague New Pipeline, Aug 3 p 72

Lubricants
Breathe Easier with Antimist Cutting Oil, by J. J. Obrzut, July 27 p 58
Solid-Films Cure Lubricating Ailments, Sept 28 p 51

Lukens Steel Co.:
Ecological Hangups Erode Heavy Steel's Market, by G. J. McManus, Aug 17 p 34
Furnace Economics Expand Mini-Mills, by G. J. McManus and K. W. Bennett, Dec 14 p 50
The Midi-Mill: It's a Different Ball Game, by G. J. McManus, Sept 7 p 95
Plate Steels Score Breakthrough in Quality, by R. R. Irving, Oct 12 p 50

Lummis Co.:
Synthetic Gas: It's a Natural, by K. W. Bennett, Aug 10 p 42

Lurgi Mineroltechnik Co.: (Germany)
Companies Jointly Sponsor Coke Pellet Pilot Plant, Sept 21 p 60

Mc

McCord Corp.:
Detroit Escalates Weight War: Plastic Seems Main Weapon, by R. A. Guiles, Oct 26 p 21

McDonnell Douglas Astronautics Co.:
Airfoil Design Provides High Lift, Low Drag, Nov 23 p 93
The Future Shock in Manufacturing, by J. E. Sandford, Aug 24 p 75
Upslope Welding Frees Aluminum from Porosity, Nov 2 p 27

McIntyre Porcupine Mines Ltd.:
New Nickel Capacity in Oversupply Period? by James Beizer, July 27 p 49

Arthur G. McKee & Co.:
Race to Stifle SO_2 Offers $10 Billion Purse, by K. W. Bennett, Oct 19 p 80

McKinsey & Co.:
Exec Pay Hikes Were 4.8 Pct in '71; Within Guidelines, Oct 26 p 44

McLouth Steel Corp.:
Slab Casters Turn it On at McLouth Steel, by G. J. McManus, Nov 30 p 51

M

MGA Technology, Inc.:
Parts Work Harder—and Longer—if Teflon-Anodized, by B. D. Wakefield, Oct 19 p 97

MTS Systems Corp.:
Fracture Toughness is No Accident, by R. R. Irving, Oct 19 p 91

M. C. Macaulay Foundry Co., Inc.:
At the Casters, When it Rains Orders it Pours, by K. W. Bennett, Nov 30 p 39

Machine Tools
Automation: Spreading Technology Too Thin? by J. E. Sandford, Dec 7 p 69
Bodine Gets on Line with In-Line Assembly, by C. J. Suchocki, Oct 26 p 38
Canadian MT Orders Score 31 Pct Gain in First Half, Sept 14 p 29
Chemical Coolant, Long Tool Life, July 20 p 50
Computer's Cousins Make New Moves, by J. E. Sandford, Sept 21 p 49
DNC Lines Link Cutting to New Future, by J. E. Sandford, Oct 26 p 46
Data Networks are a Vital Link for Industry, by A. M. Greene, Sept 21 p 53
Delivery Stretch May Squeeze MT Builders, by R. A. Wilson, Nov 2 p 41
Digital Machine Control Gives NC Another Dimension, by B. D. Wakefield, Aug 10 p 58
Drumming Up Some Business at a Machine Tool 'Sale', July 20 p 23
Dynamic Stiffness: A Performance Parameter, by R. A. Wilson, Dec 7 p 83

Elephant Tools Fire Machine Tool Climate, by K. W. Bennett, Oct 26 p 36
The Future Shock in Manufacturing, by J. E. Sandford, Aug 24 p 75
Getting Lathes Turning with the Super Tool, by R. A. Wilson, July 20 p 47
Isolators Add Precision to Presswork, by B. D. Wakefield, Aug 31 p 36
Large Lathes Don't Have to be Noisy, by R. A. Wilson, Dec 21 p 48
Latest PC Uses its Memory to Cut Cost per Function, Oct 19 p 98
Lathes Skirmish in Low-Cost Market, by J. E. Sandford, Sept 28 p 38
Low-Cost Lathe Fits Heavyweight Image, by J. E. Sandford, July 13 p 86
MT Builders Eye $5 Billion Soviet Market, by Gene Beaudet, Nov 9 p 58
MT Show: The Global Scent of Fresh Sales Blood, by K. W. Bennett, Sept 14 p 49
Machine Tool Exports from India Inch Up but Bicycles Boom, Oct 26 p 23
Machine Tools Future: The Computer Grows Up, by J. M. Beattie, Nov 30 p 44
Machine Tools: Getting Ready for More Show (Biz), by R. A. Wilson, Aug 31 p 26
Memory Chips Give Hardwired NC a Softwired Look, Sept 14 p 31
NC Bar Chucker: It's an Index to Productivity, by R. A. Wilson, July 27 p 55
'72 Machine Tool Show: Feast of Firsts for Metalworking, Aug 24 p 94
Packaging Adds Cost Appeal to NC, by J. E. Sandford, July 20 p 52
Punch Press Builders Go All the Way with NC, by B. D. Wakefield, Nov 23 p 87
Small Builder Rides the 'Edge of Accuracy', by J. E. Sandford, July 27 p 60
Soft-Wired Control Builder Sets Sight on Lathe Market, by B. D. Wakefield, Sept 7 p 102
Tool Show's Second Week Draws Fat Wallets, by K. W. Bennett, Sept 21 p 47
Towmotor Follows the Track of the Cat, by R. A. Wilson, Dec 14 p 67
Updated 6-Spindle Automatic Machines Up Productivity, Sept 21 p 27
Wankel Machine Tools Up and Running, But Where, by R. A. Wilson, Aug 31 p 15
Warner & Swasey Joins Control Builders Club, by R. A. Wilson, Sept 7 p 88
What Can You Say About Chicago? by Gene Beaudet, Aug 24 p 5
World Machine Tools: Service War? by R. A. Wilson, Aug 3 p 53

Machining

Cast-to-Shape Parts Require 50 Pct Less Secondary Machining, by B. D. Wakefield, Oct 5 p 85
Chemical Milling Grabs New Lease on Life, by K. W. Bennett, Oct 12 p 41
Machining's Exotic Sleeper Comes on Strong, by K. W. Bennett, Sept 7 p 87
Stainless Bars Put to Screw Machine Test, by B. D. Wakefield, Nov 23 p 90

Magma Copper Div.:

New Technology Triggers Copper Marketing Battle, by James Beizer, Dec 21 p 36

Magnalith Corp.:

Magnesium: There's Action in Them Thar Hills, by R. R. Irving, Nov 9 p 64

Magnesium

Magnesium: There's Action in Them Thar Hills, by R. R. Irving, Nov 9 p 64

Management

Aluminum Seeks Markets to Match its Capacity, by James Beizer, Oct 19 p 85
And Now—Would you Believe—an Engineer Shortage? Oct 12 p 31
Contract Jobs: Make Them Steady, Profitable, by K. W. Bennett, Sept 28 p 43
Do Your Thing—but Organize to Do it Well, by P. J. Cathey, Aug 17 p 41
Don't Get Defensive in an Order Downturn, by G. J. McManus, Oct 5 p 74
EPA Environment Management Blasted as 'Inadequate', by James Beizer, Dec 14 p 23
Earnings Gain Seen from Computerized Capacity Planning, Nov 23 p 92
Exec Pay Hikes Were 4.8 Pct in '71; Within Guidelines, Oct 26 p 44
Factory Profit Levels: Easy to Gage and Improve, by K. W. Bennett, Oct 26 p 42
Holding Companies are Losing their Grip, by G. J. McManus, Aug 3 p 56
How to Manage People Problems, by J. M. Beattie, Sept 14 p 57
Let Cost-Cutters Monitor Designers' Dreams, by P. J. Cathey, Aug 31 p 30
Making the Corporate Partner Concept Work, by J. M. Beattie, July 20 p 42
Management is Really Going Mod, by G. J. McManus, July 20 p 39
Motivation: What You Want is What You Get, by R. A. Guiles, Nov 2 p 46
Pinpoint Problems, Solve Them, Through Work Scheduling, Dec 21 p 43
Priorities Can Turn a Company Around, by J. M. Beattie, Aug 10 p 48
Productivity: Can 'New Carrot' be an Old One—Money? by P. J. Cathey, Sept 21 p 51
Quality Sagging? Workers Depressed? Try these Ideas, Dec 7 p 29
Sure, Care About Society, But Make a Buck, Too, Dec 14 p 25
What Black Capitalism Needs More than Anything, Dec 14 p 25
Why Not a Profit Increase Instead of a Price Increase? by G. J. McManus, Aug 17 p 37
Yes, You Can Price Steel Orders by Computer, by P. J. Cathey, Dec 14 p 56

Marathon-LeTourneau Co.:

Tempering Furnace Sets Pipe Properties, by A. M. Greene, Nov 30 p 55

Maritime Administration

Shipyards Sink Funds into Shipment Markets, by B. D. Wakefield, Nov 9 p 54

Market Digest, Weekly Page of Marketing

Marketing

Aluminum Seeks Markets to Match its Capacity, by James Beizer, Oct 19 p 85
Appliances: Steel Tries to Brake Plastics Trend, by G. J. McManus, Aug 10 p 39
Disston: The Abandoned Baby Gets Fat, by G. J. McManus, Sept 14 p 54
EB. UV Markets Take Off—but Not for Metals, by B. D. Wakefield, Oct 5 p 66
Farm Equipment: The Lush Years Return, by K. W. Bennett, July 27 p 44
Foamed Resins Vie for Sheet Metal Jobs, Nov 30 p 58
MT Show: The Global Scent of Fresh Sales Blood, by K. W. Bennett, Sept 14 p 49
Mobile Homes: Tomorrow's Recession-Proof Market? by K. W. Bennett, July 6 p 25
New Technology Triggers Copper Marketing Battle, by James Beizer, Dec 21 p 36
Soft-Wired Control Builder Sets Sight on Lathe Market, by B. D. Wakefield, Sept 7 p 102
Summer Market: There's No Time for a Siesta, Aug 10 p 68

Marsuco Co.:

OSHA May Certify Private Labs to OK Equipment, by R. A. Guiles, Sept 21 p 25

Mass Spectroscopy

Gases Check Weld Soundness of Auto Parts, Nov 2 p 53

Massey-Ferguson Ltd.:

Farm Equipment: The Lush Years Return, by K. W. Bennett, July 27 p 44

Materials

Apollo 17 to Manufacture Space Materials, Dec 7 p 31
Building Material Prices: New Ball Game, by G. J. McManus, Nov 23 p 67
Burning Wastes Test Mettle of Materials, by T. C. DuMond, Aug 10 p 52
Countdown Continues for Space Shuttle, Aug 10 p 51

Materials Handling

Air Transports Workpieces to Machinery, July 27 p 59
GE Thinks it Has Found Rich, Untapped Market, by C. J. Suchocki, Oct 19 p 82
Recovery, Overseas Lift Crane Orders, by K. W. Bennett, Oct 26 p 39
Towmotor Follows the Track of the Cat, by R. A. Wilson, Dec 14 p 67

Maxhütte (West Germany)

See: Eisenwerk-Gesellschaft-Maximillianshutte, m.b.h.

Maysteel Products Corp.:

Punch Press Builders Go All the Way with NC, by B. D. Wakefield, Nov 23 p 87

Meetings and Conventions

Computer's Cousins Make New Moves, by J. E. Sandford, Sept 21 p 49
Future Gleams for Copper Die Castings, by T. C. DuMond, Dec 21 p 50
The Future Shock in Manufacturing, by J. E. Sandford, Aug 24 p 75
"I Suppose You're Wondering . . ." You Bet, by Gene Beaudet, Nov 23 p 3
MT Show: The Global Scent of Fresh Sales Blood, by K. W. Bennett, Sept 14 p 49
Machine Tools: Getting Ready for More Show (Biz), by R. A. Wilson, Aug 31 p 26
Mining Congress Buries Optimism, by James Beizer, Sept 21 p 50
'72 Machine Tool Show: Feast of Firsts for Metalworking, Aug 24 p 94
'72 Metal Show Dazzles Cleveland, Oct 5 p 88
Tool Show's Second Week Draws Fat Wallets, by K. W. Bennett, Sept 21 p 47
What Can You Say About Chicago? by Gene Beaudet, Aug 24 p 5

Meetings and Exhibits—Dates, Locations and Sponsors for Up-Coming Conferences, Meetings and Shows

Mellon National Bank & Trust Co.

Finding the Key to Board Interlocks, Dec 7 p 73
Manufacturers Up Output with Less Workers, by G. J. McManus, Sept 14 p 52

Melting

Electron Beams Broaden their Metalworking Use, by Raymond Shah, Sept 28 p 47
Gas-Fired Melting Cleans Up Foundries, Oct 26 p 53
Low-Emission Iron Melting System Needs No Coke, Aug 24 p 31
Plasma Torches Seek New Role in Vacuum Melting, Sept 14 p 64

Menasco Mfg. Co.:

Gun Drilling Goes to the Workpiece, Dec 14 p 66

Merel Co., Inc.:

Chemical Milling Grabs New Lease on Life, by K. W. Bennett, Oct 12 p 41

Mergers

Finding the Key to Board Interlocks, Dec 7 p 73
Holding Companies are Losing their Grip, by G. J. McManus, Aug 3 p 56
NAR, Rockwell Mfg.—W. F. Rockwell Merges with Himself, by G. J. McManus, Nov 9 p 55
U.S. Industries Facing a New 'Hart' Brake? by K. A. Kaufman, Aug 3 p 57
Where Are You When I Need You? by Gene Beaudet, Sept 28 p 5

Merlin Gerin S. A.: (France)

Thin-Wall Castings Offer Hairline Accuracy, by Raymond Shah, Oct 5 p 84

Merril Lynch, Pierce, Fenner & Smith

Auto Emission Uses Will Make Platinum Even More Precious, by James Beizer, Nov 23 p 115

Metal Finishing Suppliers' Assn.:

Bumpers Reflect Bright '73 for Platers, by J. J. Obrzut, Dec 14 p 68

Metallurgy

Exotic Alloys Come Back with Gas Turbines, by B. D. Wakefield, July 6 p 40
Fracture Toughness is No Accident, by R. R. Irving, Oct 19 p 91
Future Gleams for Copper Die Castings, by T. C. DuMond, Dec 21 p 50
'72 Metal Show Dazzles Cleveland, Oct 5 p 88
Will Industry Demand ESR Quality in Carbon Steels? by R. R. Irving, Aug 3 p 69
Will SIP Add New Zip to Tired Openhearths? by J. M. Beattie, Aug 31 p 27

Metalworking Industry

Defense Budget Cuts Could Torpedo Some in Metalworking, by K. A. Kaufman, Sept 21 p 21
Do Your Thing—but Organize to Do it Well, by P. J. Cathey, Aug 17 p 41
Don't Let Price Controls Throw You, July 6 p 33
Industry and Agnes: Only the Ark Was Missing, by J. M. Beattie, G. J. McManus and D. N. Williams, July 6 p 29
Metals Builders Build a Boom, by K. W. Bennett, Aug 24 p 65
'72 Machine Tool Show: Feast of Firsts for Metalworking, Aug 24 p 94
1973: Everyday We'll Get Bigger and Better in Every Way, by K. A. Kaufman, Nov 9 p 25
Politics: Strange Bedfellows Mate, by K. A. Kaufman, James Beizer, J. M. Beattie and G. J. McManus, July 20 p 33
Primary Metals Doff Snail Image, Will Pace GNP, Study Says, by James Beizer, Dec 21 p 59
Profit Picture: Pleased as Punch, by J. M. Beattie, Nov 2 p 42

'Regional' Foreign Dumping Will be One Target of New Bill, by K. A. Kaufman, Nov 23 p 25
World Trade: The Millimeter Monster and Others, by J. M. Beattie, Oct 26 p 35

Metalworking Labor—Weekly Report of Industrial Relations, Wages and Union Activities

Metalworking Newsfront—Capsule Digests of News Items Covering Steel, Nonferrous Metals and Related Industries

Mexico
Mexico's Growth—Building Solidly, But Fast, by K. W. Bennett, Nov 23 p 69
Treasury Investigates Charge of Mexican Plate Dumping, Oct 12 p 67

Michigan State University
And Now—Would you Believe—an Engineer Shortage? Oct 12 p 31
The Yen Looks to Value-Up—and Japan's not Happy, by R. A. Guiles, Dec 7 p 72

Midwest Chrome Process Co.:
New Process Plates Composite Coating on Auto Parts, by W. G. Patton, Aug 17 p 50

Minerals
Red-Minerals Goal: A Five-Fold, 30-Year Plan, by James Beizer, Sept 21 p 80
What's So Rare About a Rare-Earth Story? by James Beizer, Aug 10 p 40

Mining Industry
Cleveland Cliffs Follows Hanna in Price Increase, Dec 21 p 39
Digging Deeper Into Strip Mining Bills, by K. A. Kaufman, July 13 p 27
Ecology in Early Planning Necessary, Says Congressman, by James Beizer, Sept 28 p 63
Mining Congress Buries Optimism, by James Beizer, Sept 21 p 50
New Nickel Capacity in Oversupply Period? by James Beizer, July 27 p 49
Ruhr District Diversity Saved Economy, Says Study, Oct 26 p 23

Minster Machine Co.:
Isolators Add Precision to Presswork, by B. D. Wakefield, Aug 31 p 36
Punch Press Builders Go All the Way with NC, by B. D. Wakefield, Nov 23 p 87
Sixteen Hundred Strokes Per Minute Won't Strain Press, Sept 28 p 25
Tool Show's Second Week Draws Fat Wallets, by K. W. Bennett, Sept 21 p 47

Mitchell Engineering Co.:
Metals Builders Build a Boom, by K. W. Bennett, Aug 24 p 65

Mitsubishi Heavy Industries, Ltd.:
American Robots May Invade Soviet Union—Via Japan, Nov 23 p 29
Copper Cartels? In Any Language it's a Loser, by James Beizer, Dec 21 p 41
Tubes Expanded by Explosives, Aug 3 p 75

Mixing Equipment Co., Inc.:
Water-Table Traps Fumes and Noise in Torch Cutting, by J. J. Obrzut, Sept 14 p 67

Mobil Oil Corp.:
Breathe Easier with Antimist Cutting Oil, by J. J. Obrzut, July 27 p 58

Modicon Corp.:
Computer's Cousins Make New Moves, by J. E. Sandford, Sept 21 p 49

Moldings
Parts "Born-to-Shape" Economy, by T. C. DuMond, Oct 5 p 79
Programmable Controller Turns on Foundry, by R. A. Wilson, Oct 5 p 82

Molybdenum Corp. of America
What's So Rare About a Rare-Earth Story? by James Beizer, Aug 10 p 40

Monsanto Chemical Corp.:
Race to Stifle SO_2 Offers $10 Billion Purse, by K. W. Bennett, Oct 19 p 80

Moog, Inc.:
Aerospace Precision Checks Servovalves for Industrial Use, Sept 21 p 58
Earnings Gain Seen from Computerized Capacity Planning, Nov 23 p 92

Morey Machine Co.:
Tool Show's Second Week Draws Fat Wallets, by K. W. Bennett, Sept 21 p 47

N

NCR Corp:
Parts "Born-to-Shape" for Economy, by T. C. DuMond, Oct 5 p 79

NL Industries, Inc.:
Magnesium: There's Action in Them Thar Hills, by R. R. Irving, Nov 9 p 64
When Wankel Puts it All Together—Watch Out, by D. N. Williams, Aug 3 p 61

Ralph Nader
Aw, C'Mon, Ralph, You Know Better, by Gene Beaudet, Oct 12 p 5
Nader Blasts Away at His First Hate—the Corvair, by D. N. Williams, July 27 p 23

Nalco Chemical Co.:
Chemical Coolant, Long Tool Life, July 20 p 50

National-Acme Co.:
Delivery Stretch May Squeeze MT Builders, by R. A. Wilson, Nov 2 p 41
Updated 6-Spindle Automatic Machines Up Productivity, Sept 21 p 27

National Aeronautics & Space Administration
Alloy with a Memory Spurs Design, Oct 5 p 86
Bearing Steel Can Outperform Higher Alloys, Dec 21 p 51
Glass-Bead Peening Plate Powder on Metal Surfaces, Nov 30 p 23
Hydrostatic Pressure Turns Tubing into Thin-Walled Tanks, Nov 2 p 51
Solid-Films Cure Lubricating Ailments, Sept 28 p 51

National Analysts, Inc.:
Public Image of Business Continues to Sag, by K. W. Bennett, Nov 9 p 52

National Assn. of Insurance Commissioners
Workmen's Comp and the Friday Flash, by J. M. Beattie, July 13 p 68

National Assn. of Purchasing Management
Are Price Controls Out of Control? by G. J. McManus, Dec 14 p 48

National Broach & Machine Div.:
Gearmakers Watch the New Developments, by W. G. Patton, Sept 14 p 61

National Bureau of Standards
Metric System Millimetres its Way to Adoption, by J. J. Obrzut, July 13 p 72

National Coil Coaters Assn.:
Zinc-Rich Coatings Enroute for Auto, Appliance Use, by K. W. Bennett, Oct 12 p 42

National Commission for Industrial Peace
Labor Day: Only Politicians Didn't Take a Vacation, Sept 14 p 23

National Electrical Manufacturers Assn.:
Steel Mills Get Out from Beneath Electrical Sheets, by G. J. McManus, July 6 p 30

National Highway Traffic Safety Administration
Highway Safety: Where are You Now that We Need You? by R. A. Guiles, Nov 30 p 20
Nader Blasts Away at His First Hate—the Corvair, by D. N. Williams, July 27 p 23
Round Two: Safety Rules Coming for Recreational Vehicles, by R. A. Guiles, Sept 14 p 55
Who Pays for Recall Defect Repair? VW Case May Decide, by R. A. Guiles, Dec 7 p 25

National Industrial Conference Board
See: Conference Board

National Labor Relations Board
Picket Line Support No Cause to Fire, High Court Says, by K. A. Kaufman, Nov 16 p 19

National Machine Tool Builders Assn.:
Delivery Stretch May Squeeze MT Builders, by R. A. Wilson, Nov 2 p 41
MT Builders Eye $5 Billion Soviet Market, by Gene Beaudet, Nov 9 p 58
Machine Tools: Getting Ready for More Show (Biz), by R. A. Wilson, Aug 31 p 26
'72 Machine Tool Show: Feast of Firsts for Metalworking, Aug 24 p 94
World Machine Tools: Service War? by R. A. Wilson, Aug 3 p 53

National Machinery Co.:
Drive Trains Warm to Cold-Forming, by R. A. Wilson, Aug 17 p 36
Forging Line Geared to High Production, by W. G. Patton, July 20 p 54
Machine Tools: Getting Ready for More Show (Biz), by R. A. Wilson, Aug 31 p 26

National Petroleum Council
The Energy Outlook: Better Late than Never? by K. A. Kaufman, Dec 21 p 21

National-Standard Co.:
Automatic Welding: Try It, You'll Like It, by B. D. Wakefield, Dec 14 p 66

National Steel Corp.:
Companies Jointly Sponsor Coke Pellet Pilot Plant, Sept 21 p 60
Continuous Casting Needs Solid Instrumentation Support, Oct 12 p 56
Continuous Cold Rolling is Now One Step Closer, by G. J. McManus, Sept 21 p 60
Steelmakers Pin Hopes on Formed Coke, by G. J. McManus, Nov 2 p 52

National Tool Die and Precision Machining Assn.:
Skills Attrition Stifles T&D Shop Revival, by R. A. Wilson, Sept 28 p 36

National Works Div.:
Will Pipe Hit Gusher from Renewed Oil-Field Activity? by G. J. McManus, Sept 21 p 48

Natural Gas
Canada's LNG Line is No Pipe Dream, Oct 12 p 53
Chemical Boost Raises Efficiency of Fuel Gases, Aug 17 p 25
Dry Compound Boosts Efficiency of Fuel Gases, by R. R. Irving, Nov 2 p 54
The LNG Boom: Up, Up and Then Back Down? by J. M. Beattie, Oct 5 p 71
LNG Tanks Gain Big Margin of Safety from Wire Girdle, by J. J. Obrzut, Aug 17 p 48
Norway Builds the Pressure-Vessel Tanker, by R. R. Irving, Aug 17 p 46
Synthetic Gas: It's a Natural, by K. W. Bennett, Aug 10 p 42
What Ya Gonna Do When the (Oil) Well Runs Dry? by R. A. Guiles, Nov 16 p 23

Negroes
See Also: Sociology
Industrial Relations
Economics
What Black Capitalism Needs More than Anything, Dec 14 p 25

Netherlands
Computer Hierarchy Governs Dutch Steel, by A. M. Greene, July 27 p 56
Plasma-Mig Process Looks Promising for Welding, Overlay, July 6 p 44

Newcor, Inc.:
Gases Check Weld Soundness of Auto Parts, Nov 2 p 53

New Equipment—Weekly Array of Latest Models and Accessories

New Idea Farm Equipment Div.:
Farm Machinery Set to Reap a Big '73, by K. W. Bennett, Nov 16 p 58

New Jersey
Everyone Talks of Emissions Testing—New Jersey Does It, by D. N. Williams, July 20 p 21

New Jersey Zinc Co.:
Waste Acid to be Recovered and Reused, Aug 3 p 31

Newmont Mining Co.:
New Technology Triggers Copper Marketing Battle, by James Beizer, Dec 21 p 36

Newport News Shipbuilding and Dry Dock Co.:
Shipyards Sink Funds into Equipment Markets, by B. D. Wakefield, Nov 9 p 54

W. H. Nichols Co.:
The Precision Edge of Abrasive Cutting, by J. E. Sandford, Dec 14 p 62

Nickel
After Nickel Labor Settles, Can a Price Hike be Far Behind? by James Beizer, July 20 p 37
In '73, Nickel Prices to Be Firm as Oversupply Fades, by James Beizer, Oct 26 p 69
New Nickel Capacity in Oversupply Period? by James Beizer, July 27 p 49
Nickel Price Boost Comes as No Surprise, by James Beizer, Sept 7 p 90
Nickel's Recovery Sets Example for Metals Companies, by James Beizer, Nov 16 p 95
Rothschilds: Buy the Suez, Form a Metals Company, by James Beizer, Dec 21 p 44
Who—If Anyone—Will Pay New Nickel Price? by G. J. McManus, Sept 14 p 53

Nickelson File Co.:
Diston: The Abandoned Baby Gets Fat, by G. J. McManus, Sept 14 p 54

Nippon Kokan
Continuous Cold Rolling is Now One Step Closer, by G. J. McManus, Sept 21 p 60

Nippon Steel Corp.:
Sheet Processing Done Continuously on New Line, Dec 21 p 25
World Steelmen Fret About Overcapacity Ulcer, by Gene Beaudet, Oct 19 p 77

Noise
Copper Alloy Gives a Damp, by T. C. DuMond, Nov 9 p 68
Large Lathes Don't Have to be Noisy, by R. A. Wilson, Dec 21 p 48
Water-Table Traps Fumes and Noise in Torch Cutting, by J. J. Obrzut, Sept 14 p 67

Nonferrous Industry
Allende Fixes Blame—On Everyone Else, by James Beizer, Dec 14 p 54
Copper's Price for Cleaner Smelters: A Cool Half Billion, by K. A. Kaufman, Aug 3 p 85
Copper's Pricing Grand Master: It's Phelps Dodge Again, by J. M. Beattie, July 13 p 97
Earnings Reports Net Only a Few, Reluctant Smiles, by James Beizer, Nov 9 p 87
Mining Congress Buries Optimism, by James Beizer, Sept 21 p 50
Mr. Allende Blames "Villains"—and to What End? by Gene Beaudet, Dec 14 p 3
Rothschilds: Buy the Suez, Form a Metals Company, by James Beizer, Dec 21 p 44
Slowly Nonferrous Earnings Log Gains, by James Beizer, Aug 10 p 46
Third Quarter for Copper—The Bears Take Over, by James Beizer, Nov 2 p 67
Up the Down Stairs Again for Lead and Brass Prices, by James Beizer, Sept 7 p 90

Nonferrous Markets, Weekly Reports Including Prices (See Also James Beizer)

Nonferrous Metals
Don't Make Us Depend on Foreign Ores, Place Urges, by James Beizer, July 20 p 67
Nonferrous: All Nations are Not So Chile, by James Beizer, Oct 5 p 72
Red-Minerals Goal: A Five-Fold, 30-Year Plan, by James Beizer, Sept 21 p 80

Nordberg Div.:
Contract Jobs: Make Them Steady, Profitable, by K. W. Bennett, Sept 28 p 43

Nordson Corp.:
Powder Coating: 'A Finisher's Finish', by J. J. Obrzut, Nov 16 p 67

North American Rockwell Corp.:
Countdown Continues for Space Shuttle, Aug 10 p 51
The Future Shock in Manufacturing, by J. E. Sandford, Aug 24 p 75
NAR, Rockwell Mfg.—W. F. Rockwell Merges with Himself, by G. J. McManus, Nov 9 p 55
Space Age Welding Tackles Axle Housings, Nov 9 p 67
3-in-Welding System, July 13 p 33
World Trade: The Millimeter Monster and Others, by J. M. Beattie, Oct 26 p 35

Northern Illinois Gas Co.:
Synthetic Gas: It's a Natural, by K. W. Bennett, Aug 10 p 42

Northrup Corp.:
Fiberglass Barges Ready for Sea Duty, Sept 28 p 52

Northwestern Steel & Wire Co.:
The Midi-Mill: It's a Different Ball Game, by G. J. McManus, Sept 7 p 95

Norton Co.:
Coated Abrasive Field Has New Nitty-Gritty, by R. A. Wilson, Sept 14 p 65
Exotic Alloys Come Back with Gas Turbines, by B. D. Wakefield, July 6 p 40
The Precision Edge of Abrasive Cutting, by J. E. Sandford, Dec 14 p 62

Norway
Norway Builds the Pressure-Vessel Tanker, by R. R. Irving, Aug 17 p 46

Nuclear Power
Common Materials Give Rankine an Edge, by B. D. Wakefield, Sept 28 p 53
Diffusion Bonding Joins Titanium for Atom Smasher, Oct 26 p 53
Japan Gets Ready to Trigger Atomic Industrial Boom, Oct 12 p 29
Nuclear Safety: The Only Fallout is $40 Million, by C. J. Suchocki, July 27 p 25
What Ya Gonna Do When the (Oil) Well Runs Dry? by R. A. Guiles, Nov 16 p 23

Numerical Control
Aerial Photo Lens Zooming in on Earthly Markets, by K. W. Bennett, Aug 31 p 24
Automation: Spreading Technology Too Thin? by J. E. Sandford, Dec 7 p 69
Bodine Gets on Line with In-Line Assembly, by C. J. Suchocki, Oct 26 p 38
Computer's Cousins Make New Moves, by J. E. Sandford, Sept 21 p 49
DNC Lines Link Cutting to New Future, by J. E. Sandford, Oct 26 p 46
Digital Machine Control Gives NC Another Dimension, by B. D. Wakefield, Aug 10 p 58
Drumming Up Some Business at a Machine Tool 'Sale', July 20 p 23
The Future Shock in Manufacturing, by J. E. Sandford, Aug 24 p 75
Lathes Skirmish in Low-Cost Market, by J. E. Sandford, Sept 28 p 38
Low-Cost Lathe Fits Heavyweight Image, by J. E. Sandford, July 13 p 86
MT Show: The Global Scent of Fresh Sales Blood, by K. W. Bennett, Sept 14 p 49
Machine Tools Future: The Computer Grows Up, by J. M. Beattie, Nov 30 p 44
Memory Chips Give Hardwired NC a Softwired Look, Sept 14 p 31
NC Bar Chucker: It's an Index to Productivity, by R. A. Wilson, July 27 p 55
Packaging Adds Cost Appeal to NC, by J. E. Sandford, July 20 p 52
The Precision Edge of Abrasive Cutting, by J. E. Sandford, Dec 14 p 62
Punch Press Builders Go All the Way with NC, by B. D. Wakefield, Nov 23 p 87
Small Builder Rides the 'Edge of Accuracy', by J. E. Sandford, July 27 p 60
Soft-Wired Control Builder Sets Sight on Lathe Market, by B. D. Wakefield, Sept 7 p 102
Tool Show's Second Week Draws Fat Wallets, by K. W. Bennett, Sept 21 p 47
Towmotor Follows the Track of the Cat, by R. A. Wilson, Dec 14 p 67
Warner & Swasey Joins Control Builders Club, by R. A. Wilson, Sept 7 p 88
World Machine Tools: Service War? by R. A. Wilson, Aug 3 p 53

O

OSHA
See: Safety
See: Health Programs

Occupational Safety and Health Act
See: Safety
See: Health Programs

Office of Emergency Preparedness
Antidumping Laws: Too Tough or Too Easy? Aug 31 p 14
Well, They Asked for an Opinion, by Gene Beaudet, Sept 7 p 5

Offshore Drilling
Tempering Furnace Sets Pipe Properties, by A. M. Greene, Nov 30 p 55

Ohmark Industries
Tool Show's Second Week Draws Fat Wallets, by K. W. Bennett, Sept 21 p 47

Oldsmobile Div.:
Automakers Bank on Blanks to Cut Scrapage, by G. J. McManus, Aug 24 p 71

Olin Brass Co.:
Up the Down Stairs Again for Lead and Brass Prices, by James Beizer, Sept 7 p 90

Olin Corp.:
Olin Exec Pegs Nonferrous Growth in '73 to Economy, by James Beizer, Dec 21 p 59
Shutdowns: One Company's Loss is Another's Gain, by G. J. McManus, Nov 23 p 61

Oloisson Corp.:
Lathes Skirmish in Low-Cost Market, by J. E. Sandford, Sept 28 p 38

Open Die Forging Institute
The Future of Forging: Help! by J. M. Beattie, Oct 12 p 44

Opinion Research Corp.:
Public Image of Business Continues to Sag, by K. W. Bennett, Nov 9 p 52

Ore & Chemical Corp.:
Auto Emission Uses Will Make Platinum Even More Precious, by James Beizer, Nov 23 p 115

Osborn Industries, Inc.:
Diamond Wheel Grinds "Impossible" Drill Materials, July 27 p 57

Owatonna Tool Co.:
Getting Lathes Turning with the Super Tool, by R. A. Wilson, July 20 p 47

Oxygen
Tired Old Cupolas Rely on Oxygen for a Second Wind, Dec 21 p 52
Will SIP Add New Zip to Tired Openhearths? by J. M. Beattie, Aug 31 p 27
Will U.S. Mills Swallow SIP? Nov 23 p 63

P

PRF Industries, Inc.:
Automakers: New Sales Road—Rec Vehicles, by R. A. Guiles, Sept 28 p 42

Packaging
Flying Fingers Package 18,000 Parts per Hour, Oct 12 p 33

Paramount Die Casting, CWC Div.:
Magnesium: There's Action in Them Thar Hils, by R. R. Irving, Nov 9 p 64

C. A. Parsons and Co., Ltd.:
The Future Shock in Manufacturing, by J. E. Sandford, Aug 24 p 75

Participative Systems, Inc.:
Quality Sagging? Workers Depressed? Try these Ideas, Dec 7 p 29

Patent Management, Inc.:
Russias's Technology Curtain to be Raised? by J. M. Beattie, Aug 24 p 69
Will Industry Demand ESR Quality in Carbon Steels? by R. R. Irving, Aug 3 p 69

Paton Institute
Will Industry Demand ESR Quality in Carbon Steels? by R. R. Irving, Aug 3 p 69

Pay Board
Control Blitz Keys on Prices, Not Wages, by K. A. Kaufman, Aug 24 p 67
Controls: Pay Board Head Opts for an Extension, Nov 23 p 23
Lower the Barriers at Home and Abroad, by Gene Beaudet and G. J. McManus, July 13 p 72
'73 May Boom, But Continued Controls are Almost Certain, by K. A. Kaufman, Nov 23 p 65
Pay Board 'Refines' Some Wage and Salary Rules, Nov 30 p 17
Wage Gains: A Far Cry from the Year Past, Nov 9 p 23
Wages: All are Created Equal but Not in Pay, Aug 17 p 19

Peabody Coal Co.:
Government Deals Copper Companies Dual Blow, by James Beizer, Sept 28 p 63
This Means War—Legal War—Between Kennecott and Chile, by James Beizer, Oct 12 p 69

Pecor Div.:
Bull Gear Flexing Won't Bully New Drive, by R. A. Wilson, Sept 7 p 101

Pellets
Cleveland Cliffs Follows Hanna in Price Increase, Dec 21 p 39
Companies Jointly Sponsor Coke Pellet Pilot Plant, Sept 21 p 60

Pennsylvania Engineering Corp.:
Bull Gear Flexing Won't Bully New Drive, by R. A. Wilson, Sept 7 p 101
The Fickle Future of Pickle Liquor? by G. J. McManus, Oct 19 p 83

Furnace Economics Expand Mini-Mills, by G. J. McManus and K. W. Bennett, Dec 14 p 50
Will SIP Add New Zip to Tired Openhearths? by J. M. Beattie, Aug 31 p 27
Will U.S. Mills Swallow SIP? Nov 23 p 63

Pensions

Pension Bill Tide Hits High Water-Mark in Congress, by K. A. Kaufman, Sept 28 p 37

Peoples Gas, Light & Coke Co.:

Synthetic Gas: It's a Natural, by K. W. Bennett, Aug 10 p 42

Petroleum Industry

What Ya Gonna Do When the (Oil) Well Runs Dry? by R. A. Guiles, Nov 16 p 23
Will Pipe Hit Gusher from Renewed Oil-Field Activity, by G. J. McManus, Sept 21 p 48

Pfizer, Inc.:

Race to Stifle SO_2 Offers $10 Billion Purse, by K. W. Bennett, Oct 19 p 80

Phelps Dodge Corp.:

Copper Consumption in '73 Should Absorb Hike in Output, by James Beizer, Dec 7 p 119
Copper's Pricing Grand Master: It's Phelps Dodge Again, by J. M. Beattie, July 13 p 97

Philips Industries, Inc.:

Mobile Homes: Tomorrow's Recession-Proof Market? by K. W. Bennett, July 6 p 25

N. V. Philips, Ltd.: (Netherlands)

Stirling Engines: A Golden Oldie, but is it Sterling? by R. A. Wilson, Aug 17 p 23

Philips Research Laboratories (Netherlands)

Plasma-Mig Process Looks Promising for Welding, Overlay, July 6 p 44

Phoenix Steel Corp.:

Ecological Hangups Erode Heavy Steel's Market, by G. J. McManus, Aug 17 p 34
Industry and Agnes: Only the Ark Was Missing, by J. M. Beattie, G. J. McManus and D. N. Williams, July 6 p 29

Pickling

The Fickle Future of Pickle Liquor? by G. J. McManus, Oct 19 p 83

Pipe

Flexible System Simplifies Annealing of Pipe Welds, Nov 2 p 54
Large-Diameter Plastic Pipe Extruded on Site, Nov 23 p 31
Tempering Furnace Sets Pipe Properties, by A. M. Greene, Nov 30 p 55

Pipelines

Brittle Fractures Plague New Pipeline, Aug 3 p 72
Canada Plans Mill for Arctic Pipeline, Aug 10 p 55
Canada's LNG Line is No Pipe Dream, Oct 12 p 53
Pipeline Charging for Coke May Get Push from U.S. Steel, by G. J. McManus, July 13 p 67
Will Pipe Hit Gusher from Renewed Oil-Field Activity? by G. J. McManus, Sept 21 p 48

Pittsburgh Annealing Box Co.:

Don't Get Defensive in an Order Downturn, by G. J. McManus, Oct 5 p 74

Pittsburgh Forgings Co.:

Are Price Controls Out of Control? by G. J. McManus, Dec 14 p 48

Plasma Technology

Plasma-Mig Process Looks Promising for Welding, Overlay, July 6 p 44
Plasma Torches Seek New Role in Vacuum Melting, Sept 14 p 64
Water-Table Traps Fumes and Noise in Torch Cutting, by J. J. Obrzut, Sept 14 p 67

Plastics

Appliances: Steel Tries to Brake Platics Trend, by G. J. McManus, Aug 10 p 39
Burning Wastes Test Mettle of Materials, by T. C. DuMond, Aug 10 p 52
Detroit Escalates Weight War: Plastic Seems Main Weapon, by R. A. Guiles, Oct 26 p 21
Fiberglass Barges Ready for Sea Duty, Sept 28 p 52
Foamed Resins Vie for Sheet Metal Jobs, Nov 30 p 58
Large-Diameter Plastic Pipe Extruded on Site, Nov 23 p 31
Plastic Coating Gives Bright Future to Copper, Nov 16 p 25
Plastic Metals Offer Flexibility in Tooling, Aug 17 p 52
Plastics Will Not Steel the Show in 1973 Models, by R. A. Wilson, Aug 24 p 25
Powder Coating: 'A Finisher's Finish', by J. J. Obrzut, Nov 16 p 67

Plate, Sheet and Strip

Plate Steels Score Breakthrough in Quality, by R. R. Irving, Oct 12 p 50
Treasury Investigates Charge of Mexican Plate Dumping, Oct 12 p 67
Why Not a Profit Increase Instead of a Price Increase? by G. J. McManus, Aug 17 p 37

Plating

Bumpers Reflect Bright '73 for Platers, by J. J. Obrzut, Dec 14 p 68

Platinum

Auto Emission Uses Will Make Platinum Even More Precious, by James Beizer, Nov 23 p 115

Plessey Micro Scientific, Inc.:

Chemical Milling Grabs New Lease on Life, by K. W. Bennett, Oct 12 p 41

Podolsky & Associates

Bargain Plant Leases Disappear, by K. W. Bennett, July 13 p 66

Polar Chip, Inc.:

Cutting Fluid Works on New Principle, Sept 28 p 54

Pollution, Air

Abatement Costs: No Expenses Will be Spared, Aug 24 p 27
Another Zinc Smelter Bites Emission Dust, by James Beizer, Aug 24 p 117
Auto Emission Uses Will Make Platinum Even More Precious, by James Beizer, Nov 23 p 115
Auto Emissions: Are Converters Coming for '75? by R. A. Guiles, Oct 5 p 68
Automaker Fights Pollution Via Computer, Aug 3 p 76
Bethlehem Buys New Clean-Up Gear with Bonds, Sept 7 p 17
Burning Wastes Test Mettle of Materials, by T. C. DuMond, Aug 10 p 52
Clean Up at Armco and J&L Tagged "Unique" and "Biggest", Nov 30 p 21
Copper Company Balances Ecology with Economy, by James Beizer, Nov 2 p 49
Copper's Price for Cleaner Smelters: A Cool Half Billion, by K. A. Kaufman, Aug 3 p 85
Court Slaps EPA and Lets Smelters Off Pollution Hook, by James Beizer, Dec 14 p 83
EPA Environment Management Blasted as 'Inadequate', by James Beizer, Dec 14 p 23
EPA Foils Probe of Smelter Rules, by James Beizer, Sept 7 p 89
EPA May "Formally" OK Some Excess Plant Emissions, Sept 7 p 17
EPA vs Mills: Costs are in Eye of Beholder, by G. J. McManus, Oct 12 p 43
Ecology's Latest Sacrifice: Burned No. 2 Bundles? by K. W. Bennett, Aug 31 p 28
Emissions: Well, Somebody Thinks They've an Answer, by R. A. Guiles, Oct 12 p 27
Everyone Talks of Emission Testing—New Jersey Does It, by D. N. Williams, July 20 p 21
Ford Engine Flunks EPA Emissions Test, Will Try, Try Again, Oct 5 p 25
Ford Mulls Honda Tie-Up, Eyes New "Clean" Engine, Nov 9 p 29
GM Has a Better Idea on Emission Testing, by D. N. Williams, July 6 p 20
Mobile Lab Puts Pollution Control on Wheels, Aug 3 p 27
More About Smelters and the Environment, by James Beizer, Aug 17 p 61
Pollution Control: It's Now a Package Deal, by K. W. Bennett, Nov 9 p 60
Pollution Tax: A Matter of Market Control, by C. J. Suchocki, Aug 10 p 27
Race to Stifle SO_2 Offers $10 Billion Purse, by K. W. Bennett, Oct 19 p 80
Tired Old Cupolas Rely on Oxygen for a Second Wind, Dec 21 p 52
Water-Table Traps Fumes and Noise in Torch Cutting, by J. J. Obrzut, Sept 14 p 67
What Ya Gonna Do When the (Oil) Well Runs Dry? by R. A. Guiles, Nov 16 p 23

Pollution, Water

Abatement Costs No Expenses Will be Spared, Aug 24 p 27
Congress Sends Tough Clean-Stream Measure to Nixon, by K. A. Kaufman, Oct 12 p 25
EPA vs Mills: Costs are in Eye of Beholder, by G. J. McManus, Oct 12 p 43
Exporter Memo: Dump Before the Phantom Strikes, by C. J. Suchocki, July 13 p 31
The Fickle Future of Pickle Liquor? by G. J. McManus, Oct 19 p 83
No-Rinse Pretreatment Thwarts Pollution, Dec 7 p 90
Pollution Control: It's Now a Package Deal, by K. W. Bennett, Nov 9 p 60
Pollution Tax: A Matter of Market Control, by C. J. Suchocki, Aug 10 p 27
USS Coke Ovens: Steel's Reluctant Leader, by G. J. McManus, Oct 5 p 67
Water Treatment—Is $5 Billion Enough? Too Little, Too Late? Dec 7 p 23

Polymer Corp.:

Powder Coating: 'A Finisher's Finish', by J. J. Obrzut, Nov 16 p 67

Pontiac Div.:

Grease Monkey: Auto Jungle's Dying Species, by R. A. Guiles, Sept 28 p 22

H. K. Porter Co.:

Disston: The Abandoned Baby Gets Fat, by G. J. McManus, Sept 14 p 54

Powder Coatings

Glass-Bead Peening Plates Powder on Metal Surfaces, Nov 30 p 23
Powder Coating: 'A Finisher's Finish', by J. J. Obrzut, Nov 16 p 67

Powdered Metals

Forging PM Performs Lead to Part Economy, by B. D. Wakefield, July 27 p 53
Gatorizing Brings Economy to Forging of Superalloys, July 13 p 84
Gearmakers Watch the New Developments, by W. G. Patton, Sept 14 p 61
PM Parts Production Finally Hits the Big Time, by W. G. Patton, Sept 7 p 86
PM Superalloys: Not Low Cost, But Cost Effective, Aug 31 p 16
Parts "Born-to-Shape" for Economy, by T. C. DuMond, Oct 5 p 79
Sealing Method Expends Usage of PM. Die Cast Parts, Nov 30 p 57

Pratt & Lambert Co.:

Powder Coating: 'A Finisher's Finish', by J. J. Obrzut, Nov 16 p 67

Pratt & Whitney Aircraft Corp.:

Exotic Alloys Come Back with Gas Turbines, by B. D. Wakefield, July 6 p 40
Gatorizing Brings Economy to Forging of Superalloys, July 13 p 84
Liquid Layer Aids Jet Blade Bonding, Nov 2 p 55
PWM: New Tiger in Cutting Tools, by R. A. Wilson, July 13 p 69

Pratt & Whitney Machine Tool Div.:

Lathes Skirmish in Low-Cost Market, by J. E. Sandford, Sept 28 p 38
Low-Cost Lathe Fits Heavyweight Image, by J. E. Sandford, July 13 p 86

Precision Instruments, Inc.:

An Answer to 'How Tight is Tight?' by B. D. Wakefield, July 13 p 82

Preload Technology, Inc.:

LNG Tanks Gain Big Margin of Safety from Wire Girdle, by J. J. Obrzut, Aug 17 p 48
Wire-Wrapped LNG Storage Tanks Withstand Impact, Aug 10 p 29

Presses

Isolators Add Precision to Presswork, by B. D. Wakefield, Aug 31 p 36
Punch Press Builders Go All the Way with NC, by B. D. Wakefield, Nov 23 p 87
Sixteen Hundred Strokes Per Minute Won't Strain Press, Sept 28 p 25

Pressure Vessels

Aluminum Invades Steel's Market for High Pressure Tanks, by James Beizer, Nov 9 p 69
Hydrostatic Pressure Turns Tubing into Thin-Walled Tanks, Nov 2 p 51
Norway Builds the Pressure-Vessel Tanker, by R. R. Irving, Aug 17 p 46
Vertical Welding Goes into Orbit, by R. R. Irving, Oct 26 p 50

Price Commission

Are Price Controls Out of Control? by G. J. McManus, Dec 14 p 48
Control Blitz Keys on Prices, Not Wages, by K. A. Kaufman, Aug 24 p 67
Controls Here to Stay? Forever? by Gene Beaudet, Nov 9 p 5
Don't Let Price Controls Throw You, July 6 p 33
Laclede Rollback: Pricing's Guinea Pig? by G. J. McManus, July 27 p 47
Lower the Barriers at Home and Abroad, by Gene Beaudet and G. J. McManus, July 13 p 72
'73 May Boom, But Continued Controls are Almost Certain, by K. A. Kaufman, Nov 23 p 65
PC Drops Profit Barrier for Minor Hikes, Aug 31 p 14
Silver Export Boats Meeting in Mid-Atlantic? by James Beizer, Aug 10 p 67

Steel Hikes to be Scattered Throughout '73, by G. J. McManus, Sept 21 p 45
Steel Summary: Price Hikes and Profits Problems, Dec 7 p 117
Steel Summary: A Price Increase for Every Reason, Nov 30 p 65
UAW Scales Olympian Heights in Car-Pricing, Sept 21 p 19

Prices—Steel Industry's Most Up-to-Date Weekly Tabulation of Prices for All Forms of Steel from Scrap to Strip

Prices
All About Silver and the Controls that Never Were? by James Beizer, Aug 17 p 61
Aluminum Has Trouble Making Prices Stick, by James Beizer, Nov 16 p 95
Aluminum: Only the Pricing is Still Sick, by James Beizer, Oct 26 p 40
Aluminum Over-Capacity May Abort Price Hikes, by James Beizer, Dec 7 p 119
Are Price Controls Out of Control? by G. J. McManus, Dec 14 p 48
Building Material Prices: New Ball Game, by G. J. McManus, Nov 23 p 67
Cleveland Cliffs Follows Hanna in Price Increase, Dec 21 p 39
Copper Price Ought to Go Up or Down—It Probably Won't, Nov 30 p 67
Copper's Price for Cleaner Smelters: A Cool Half Billion, by K. A. Kaufman, Aug 3 p 85
Copper's Pricing Grand Master: It's Phelps Dodge Again, by J. M. Beattie, July 13 p 97
Don't Let Price Controls Throw You, July 6 p 33
How Much Will Auto Prices Go Up? by D. N. Williams, July 13 p 65
In '73, Nickel Prices to Be Firm as Oversupply Fades, by James Beizer, Oct 26 p 69
Laclede Rollback: Pricing's Guinea Pig? by G. J. McManus, July 27 p 47
Mini-Computers: DECKing the Halls with Price Cuts? by R. A. Wilson, July 13 p 64
PC Drops Profit Barriers for Minor Hikes, Aug 31 p 14
Price Relief—Can Steel Dent Commission's Wall? by G. J. McManus, Aug 24 p 67
Pricing is Big Worry for Aluminum Producers, by James Beizer, Nov 2 p 67
Some Strange Happenings in the Copper Market, by James Beizer, Aug 31 p 45
Spot Tin Prices: Are They Really on the Up and Up? by James Beizer, Sept 14 p 89
Steel Hikes to be Scattered Throughout '73, by G. J. McManus, Sept 21 p 45
Steel Summary: Price Hikes and Profits Problems, Dec 7 p 117
Steel Summary: Looking Ahead for Price Relief, Aug 24 p 115
Steel Summary: A Price Increase for Every Reason, Nov 30 p 65
Steel Summary: Is Stainless Due for a Boost? July 20 p 65
Steel Summary: Rising Demand, Costs Don't Buoy Prices, Nov 9 p 70
UAW Scales Olympian Heights in Car-Pricing, Sept 21 p 19
U.S. Steel Shocks Industry with Price Hike, by G. J. McManus, Nov 23 p 61
Up the Down Stairs Again for Lead and Brass Prices, by James Beizer, Sept 7 p 90
Who—If Anyone—Will Pay New Nickel Price? by G. J. McManus, Sept 14 p 53
Why Not Try a Profit Increase Instead of a Price Increase? by G. J. McManus, Aug 17 p 37
Woodcock Wracks Automakers Over Profiteering, Oct 19 p 5
World Copper Stocks Up; But Whither Go Prices, by James Beizer, Oct 5 p 123
Yes, You Can Price Steel Orders by Computer, by P. J. Cathey, Dec 14 p 56

Prince Corp.:
Diecasting Equipment Orders Begin to Boom, by K. W. Bennett, Oct 26 p 37

Production
Automation: Spreading Technology Too Thin? by J. E. Sandford, Dec 7 p 69
Contract Jobs: Make Them Steady, Profitable, by K. W. Bennett, Sept 28 p 43
Factory Profit Levels: Easy to Gage and Improve, by K. W. Bennett, Oct 26 p 42
The Future Shock in Manufacturing, by J. E. Sandford, Aug 24 p 75
Manufacturers Up Output with Less Workers, by G. J. McManus, Sept 14 p 52
Parts "Born-to-Shape" for Economy, by T. C. DuMond, Oct 5 p 79
Productivity Gains—and OSHA—Spur Diecasting, by K. W. Bennett, Oct 26 p 37

Programmable Controllers
Computer's Cousins Make New Moves, by J. E. Sandford, Sept 21 p 49
Latest PC Uses its Memory to Cut Cost per Function, Oct 19 p 98
Programmable Controller Turns on Foundry, by R. A. Wilson, Oct 5 p 82

Prototype and Plastic Mold Co.:
Plastic Metals Offer Flexibility in Tooling, Aug 17 p 52

Psychology
How to Manage People Problems, by J. M. Beattie, Sept 14 p 57
Motivation: What You Want is What You Get, by R. A. Guiles, Nov 2 p 46

Public Relations
Public Image of Business Continues to Sag, by K. W. Bennett, Nov 9 p 52

Pullman, Inc.:
Caution Light Slows RR Recovery, by K. W. Bennett, Aug 3 p 58
Synthetic Gas: It's a Natural, by K. W. Bennett, Aug 10 p 42
VIP Soviet Trade Bait Draws Early Bites, by K. A. Kaufman and G. J. McManus, Oct 26 p 34

Pullman-Standard Div.:
Caution Light Slows RR Recovery, by K. W. Bennett, Aug 3 p 58
Going for the Jugular in Mass Transit? by J. M. Beattie, July 27 p 41

Punching
Punch Press Builders Go All the Way with NC, by B. D. Wakefield, Nov 23 p 87

Purchasing
Are Price Controls Out of Control? by G. J. McManus, Dec 14 p 48

Q

Quality Control
Aerospace Precision Checks Servovalves for Industrial Use, Sept 21 p 58
Plate Steels Score Breakthrough in Quality, by R. R. Irving, Oct 12 p 50
Product Liability: Industry's Newest Tax? by I. G. Black, Aug 31 p 23
Quality Sagging? Workers Depressed? Try these Ideas, Dec 7 p 29

Questor Corp.:
Auto Emissions: Are Converters Coming for '75? by R. A. Guiles, Oct 5 p 68
Emissions: Well, Somebody Thinks They've an Answer, by R. A. Guiles, Oct 12 p 27

R

Racquet Shop (Radnor, Penna.)
Metals Volley for Top Tennis Seeding, by T. C. DuMond, Aug 31 p 32

Radiation Polymer Co.:
EB, UV Markets Take Off—but Not for Metals, by B. D. Wakefield, Oct 5 p 66

Radio Corp. of America
Let Cost-Cutters Monitor Designers' Dreams, by P. J. Cathey, Aug 31 p 30
Shutdowns: One Company's Loss is Another's Gain, by G. J. McManus, Nov 23 p 61

Railroads
Caution Light Slows RR Recovery, by K. W. Bennett, Aug 3 p 58
Fight Over Boxcars Keeps on Rollin' Along, by K. A. Kaufman, Aug 17 p 21
Steel-Tied Panels Make Tracks in Rail Market, Aug 10 p 55

Rare Earths
See Also: Mining Industry Minerals
What's So Rare About a Rare-Earth Story? by James Beizer, Aug 10 p 40

Raycon Corp.:
EDM Puts Precision Holes in Hard Metals, by W. G. Patton, Nov 30 p 56

Recreational Vehicles
Automakers' New Sales Road—Rec Vehicles, by R. A. Guiles, Sept 28 p 42
Round Two: Safety Rules Coming for Recreational Vehicles, by R. A. Guiles, Sept 14 p 55

Recruitment
College Grads Find Corporate Recruitment Changed, Nov 30 p 49

Rectrans Div.:
Automakers' New Sales Record—Rec Vehicles, by R. A. Guiles, Sept 28 p 42
Round Two: Safety Rules Coming for Recreational Vehicles, by R. A. Guiles, Sept 14 p 55

Redman Industries, Inc.:
Mobile Homes: Tomorrow's Recession-Proof Market? by K. W. Bennett, July 6 p 25

Reliance Steel & Aluminum Co.:
Blanking System Parlays Speed with Precision, Aug 31 p 37

Repair Centers
Federal Auto Repair Centers are Planned, by R. A. Guiles, Oct 19 p 25
Who Pays for Recall Defect Repair? VW Case May Decide, by R. A. Guiles, Dec 7 p 25

Republic Steel Corp.:
EPA vs Mills: Costs are in Eye of Beholder, by G. J. McManus, Oct 12 p 43
Metals Builders Build a Boom, by K. W. Bennett, Aug 24 p 65
Metals Looks for a Home in Housing, by R. A. Wilson, Nov 9 p 56
Shutdowns: One Company's Loss is Another's Gain, by G. J. McManus, Nov 23 p 61
Steel Earnings: The Only Way to Go is Up, by G. J. McManus, Aug 3 p 55
Steel Summary: Bigger and Better in 1973? Dec 14 p 81
With Profits Elusive, Republic Steel Says "Nuts" to Bolts, by R. A. Wilson, Nov 16 p 61

Research & Development
See: Science & Technology

Research Automation Corp.:
Flying Fingers Package 18,000 Parts per Hour, Oct 12 p 33

Resources Conservation Co.:
Pollution Control: It's Now a Package Deal, by K. W. Bennett, Nov 9 p 60

Rex Chainbelt, Inc.:
Contract Jobs: Make Them Steady, Profitable, by K. W. Bennett, Sept 28 p 43
Pollution Control: It's Now a Package Deal, by K. W. Bennett, Nov 9 p 60

Reynolds Metals Co.:
Aluminum in Autos: Sometimes You Add by Cutting-Weight, by R. A. Guiles, Nov 2 p 23
Aluminum: Only the Pricing is Still Sick, by James Beizer, Oct 26 p 40
Aluminum Statistics Rosy, But Next Year Smells Even Better, by James Beizer, Oct 5 p 123
Soviet Technology: Is this the Start of Something More? by James Beizer, Aug 31 p 45

Rhodesia
House Cool to Embargo on Rhodesian Chrome, by K. A. Kaufman, Aug 24 p 23

Rising Sun Steel Co.:
Cusom-Cutting Creates Big Saw Market in U.S. Service Centers, by B. D. Wakefield, Oct 26 p 51

C. A. Roberts Co.:
Coating Extends Aluminum Potential, Sept 28 p 54

H. H. Robertson Co.:
U.S. Comes in Ninth on Inflation, by G. J. McManus, July 13 p 33

Robots
American Robots May Invade Soviet Union—Via Japan, Nov 23 p 29

Rockwell Mfg. Co.:
Why Not Try a Profit Increase Instead of a Price Increase? by G. J. McManus, Aug 17 p 37
Will Pipe Hit Gusher from Renewed Oil-Field Activity? by G. J. McManus, Sept 21 p 48

W. F. Rockwell
NAR, Rockwell Mfg.—W. F. Rockwell Merges with Himself, by G. J. McManus, Nov 9 p 55

Rods
New Technology Triggers Copper Marketing Battle, by James Beizer, Dec 21 p 36

Rohr Corp.:
Going for the Jugular in Mass Transit? by J. M. Beattie, July 27 p 41

Rollins International, Inc.:
Pollution Control: It's Now a Package Deal, by K. W. Bennett, Nov 9 p 60

Rollins-Purle, Inc.:
Pollution Control: It's Now a Package Deal, by K. W. Bennett, Nov 9 p 60

Rolls
Bending Roll Forms 14-In. Steel Plate, Sept 14 p 64

Rolls-Royce, Ltd.:
Electron Beams Broaden their Metalworking Use, by Raymond Shah, Sept 28 p 47

Rome Strip Steel Co.:
Yes, You Can Price Steel Orders by Computer, by P. J. Cathey, Dec 14 p 56

Kenneth Rosewall
Metals Volley for Top Tennis Seeding, by T. C. DuMond, Aug 31 p 32

Rothe Foundry Co.:
At the Casters, When it Rains Orders it Pours, by K. W. Bennett, Nov 30 p 39

Rothschild Family
Rothschilds: Buy the Suez, Form a Metals Company, by James Beizer, Dec 21 p 44

Arthur Rubloff & Co.:
Bargain Plant Leases Disappear, by K. W. Bennett, July 13 p 66

Rudge Associates
Productivity: Can 'New Carrot' be an Old One—Money? by P. J. Cathey, Sept 21 p 51

Rudy Mfg. Co.:
Fluxless Aluminum Soldering Heads for Production Line, by J. J. Obrzut, Dec 21 p 55

S

Safety
Bodine Gets on Line with In-Line Assembly, by C. J. Suchocki, Oct 26 p 38
The Book on OSHA Rules: Do it Anyway, by J. M. Beattie, Oct 19 p 17
Can Detroit's Wand Turn Federal Safety Beast into a Beauty? by R. A. Guiles, Nov 9 p 27
GM Trial Balloon: Will Safety Sell Cars Now? by R. A. Wilson, Sept 14 p 27
Highway Safety Where are You Now that We Need You? by R. A. Guiles, Nov 30 p 20
Industry Beware—OSHA is on the Warpath Once More, Sept 7 p 21
Multi-Plant Firms Have Bigger OSHA Headaches, by R. A. Guiles, Oct 12 p 45
Nader Blasts Away at His First Hate—the Corvair, by D. N. Williams, July 27 p 23
New Bumpers Bounce Back, Come on Strong, by R. A. Guiles, Sept 21 p 23
New Workmen's Comp: Campaign Bait? by J. M. Beattie, Aug 10 p 44
Nuclear Safety: The Only Fallout is $40 Million, by C. J. Suchocki, July 27 p 25
OSHA Lays Down the Law on Private Court Suits, Oct 12 p 23
OSHA May Certify Private Labs to OK Equipment, by R. A. Guiles, Sept 21 p 25
OSHA: No Pay for Small Fry? by K. A. Kaufman, Aug 17 p 37
OSHA Proposal Seeks State Inspection Continuance, Oct 26 p 17
OSHA Pushes On But States Lag in Setting Job Safety Plans, Nov 30 p 21
Productivity Gains—and OSHA—Spur Diecasting, by K. W. Bennett, Oct 26 p 37
The Race is Over, but Compensation Payoff is Held Up, by J. M. Beattie, July 13 p 68
Round Two: Safety Rules Coming for Recreational Vehicles, by R. A. Guiles, Sept 14 p 55
Safety Bumps Up High-Strength Steel Stock, by R. A. Guiles, Nov 16 p 20
Safety: You Can't Always Go by the Book, Oct 19 p 21
Worker Benefits: Business Tabbed Key to Reform, Dec 14 p 17
Workmen's Comp and the Friday Flash, by J. M. Beattie, July 13 p 68

St. Joe Minerals Corp.:
Up the Down Stairs Again for Lead and Brass Prices, by James Beizer, Sept 7 p 90

St. Louis Car Div.:
Going for the Jugular in Mass Transit? by J. M. Beattie, July 27 p 41

Sandwich Construction
Stresskin Lightens the Supersonic Load, by J. E. Sandford, July 6 p 45

Sar Chesmeh Copper Mining Co.:
Nonferrous: All Nations are Not So Chile, by James Beizer, Oct 5 p 72

Satellites
Countdown Continues for Space Shuttle, Aug 10 p 51

Satra Corp.:
U.S.-Soviet Trade: Penpals Without Any Pens? by R. A. Wilson, Nov 30 p 42

W. J. Savage Co., Inc.:
Custom-Cutting Creates Big Saw Market in U.S. Service Centers, by B. D. Wakefield, Oct 26 p 51

Schlienger, Inc.:
Plasma Torches Seek New Role in Vacuum Melting, Sept 14 p 64

Richard O. Schulz Co.:
Custom-Cutting Creates Big Saw Market in U.S. Service Centers, by B. D. Wakefield, Oct 26 p 51

Richard S. Schweiker
'Regional' Foreign Dumping Will be One Target of New Bill, by K. A. Kaufman, Nov 23 p 25

Science & Techlonogy
Energy Crisis: The Big Turn Off? by J. M. Beattie, Dec 7 p 70
Success in R&D Without Deficit Spending, by P. J. Cathey, Nov 30 p 43

Scovill Mfg. Co.:
Powder Coating: 'A Finisher's Finish', by J. J. Obrzut, Nov 16 p 67

Scrap—Ferrous Markets and Prices, Weekly Tabulations

Scrap
As Market's Second Half Begins, Is the Best Yet to Come? July 13 p 98
Customer Grumblings Crowd Mills into Steel Scrap Changes, by G. J. McManus, Nov 16 p 60
Don't Look Now, But there's Some Weakness in Air, Sept 28 p 65
Ecology's Latest Sacrifice: Burned No. 2 Bundles? by K. W. Bennett, Aug 31 p 28
Export Scrap—Believe it or Not—Returns to Life, July 20 p 68
Exports Help a Dull Market to Limp Along, Sept 7 p 144
Figuring How Much Export May Improve is Difficult, Aug 24 p 118
Freight-Rate Rise Hijacks Export Scrap Market, Oct 12 p 70
How Much Longer Will the Market Remain Quiet? Sept 14 p 90
Is Market's Summer Vacation Coming to an End? Aug 3 p 86
Is U.S. Steel Out to Obsolete the Scrap Broker? Oct 5 p 124
July Scrap Market: Everything Except the Fireworks, July 6 p 54
Listless Market Has Wait-and-See Attitude, Sept 21 p 83
Market Action Veers from West to East, Aug 31 p 46
The Market Continues to Rise in the Fall, Nov 9 p 88
Market Drifts—Waiting for a Breeze to Come Up, Oct 26 p 70
Market Finally Starts Putting it All Together, Nov 23 p 118
The Market is Enjoying its New Prosperity, Dec 14 p 84
Market is Flying in Wild Orbit; Splashdown Unlikely, Dec 21 p 62
Market Moves from Strong to Super-Strong, Dec 7 p 120
Market Picks Up Strength as it Enters December, Nov 30 p 68
Momentum Paces Market to New Gains, Nov 16 p 96
The November Market: Surprise, Surprise? Nov 2 p 68
RRs vs Recyclers: SCRAP for Scrap's Sake, by C. J. Suchocki, July 27 p 25
Scrap, Ecologists Get ICC to Delay Scrap Freight Hike, by K. A. Kaufman, Nov 16 p 19
Scrap is in Short Supply—but So is Heavy Demand, Aug 17 p 62
Summer Market: There's No Time for a Siesta, Aug 10 p 68
Upturn Coming, but its Timetable Still in Doubt, July 27 p 70

Sealectro Corp.:
Productivity: Can 'New Carrot' be an Old One—Money? by P. J. Cathey, Sept 21 p 51

Seals
Sealing Method Expands Usage of PM, Die Cast Parts, Nov 30 p 57

Sears, Roebuck & Co.:
Will Success Spoil Inflation Controls? by K. W. Bennett, Dec 21 p 42

Seatrain Shipbuilding Corp.:
The Ship Comes in for Shipbuilders, July 13 p 95

Securitron Corp.:
It Takes Billions to Catch a Thief, by K. W. Bennett, Aug 17 p 38

Seiki Corp.:
World Machine Tools: Service War? by R. A. Wilson, Aug 3 p 53

Selrite Blacksmith Shop
Powder Coating: 'A Finisher's Finish', by J. J. Obrzut, Nov 16 p 67

SermeTel Div.:
Ceramic Coating System Controls Heat Flow, Sept 14 p 66

Service Centers
Custom-Cutting Creates Big Saw Market in U.S. Service Centers, by B. D. Wakefield, Oct 26 p 51

Servo Valves
Aerospace Precision Checks Servovalves for Industrial Use, Sept 21 p 58

Shalco Systems, Acme-Cleveland, GmbH
Acme-Cleveland Adds to European Penetration, July 6 p 26

Sharon Steel Corp.:
The Midi-Mill: It's a Different Ball Game, by G. J. McManus, Sept 7 p 95
Steel Earnings: The Only Way to Go is Up, by G. J. McManus, Aug 3 p 55

Sheet and Strip
Sheet Processing Done Continuously on New Line, Dec 21 p 25
Steel Mills Get Out from Beneath Electrical Sheets, by G. J. McManus, July 6 p 30

Sheldon Machine Co.:
Lathes Skirmish in Low-Cost Market, by J. E. Sandford, Sept 28 p 38

Shell Oil Co.:
Synthetic Gas: It's a Natural, by K. W. Bennett, Aug 10 p 42

Sherwood Steel Co.:
Safety Bumps Up High-Strength Steel Stock, by R. A. Guiles, Nov 16 p 20

Shipbuilding
Fiberglass Barges Ready for Sea Duty, Sept 28 p 52
Norway Builds the Pressure-Vessel Tanker, by R. R. Irving, Aug 17 p 46
The Ship Comes in for Shipbuilders, July 13 p 95
Ship Hull Section Takes Two Hours to Build, Sept 14 p 68
Shipyards Sink Funds into Equipment Markets, by B. D. Wakefield, Nov 9 p 54

Silver
All About Silver and the Controls that Never Were? by James Beizer, Aug 17 p 61
Silver Export Boats Meeting in Mid-Atlantic? by James Beizer, Aug 10 p 67

Sinclair-Koppers Co.:
Building Material Prices: New Ball Game, by G. J. McManus, Nov 23 p 67

Singer Co.:
Powder Coating: 'A Finisher's Finish', by J. J. Obrzut, Nov 16 p 67

Skyline Corp.:
Mobile Homes: Tomorrow's Recession-Proof Market? by K. W. Bennett, July 6 p 25

Slabs
Slab Casters Turn it On at McLouth Steel, by G. J. McManus, Nov 30 p 51

A. O. Smith Corp.:
Forging PM Preforms Leads to Part Economy, by B. D. Wakefield, July 27 p 53

Society of the Plastic Industry
Burning Wastes Test Mettle of Materials, by T. C. DuMond, Aug 10 p 52

Sociology
Archie Bunker Now Meets "Tom Smith", by Gene Beaudet, Aug 31 p 5
Does This Surprise You? Should It? by Gene Beaudet, Oct 19 p 5
Lamebrain Hiring Thwarts Handicapped, by K. W. Bennett, July 20 p 36
You're Hired, but First this Little Test? by R. A. Guiles, Oct 5 p 70

Solar Div.:
Exotic Alloys Come Back with Gas Turbines, by B. D. Wakefield, July 6 p 40

Soldering
Fluxless Aluminum Soldering Heads for Production Line, by J. J. Obrzut, Dec 21 p 55

Ultrasonics Rids Flux from the Soldering of Aluminum Tubing, Aug 31 p 35

Sony Trading Corp.:

Multinationalism: Industry and Labor Go Begging, by R. A. Guiles, Nov 2 p 19

South America

As You Say, Mr. Nixon, "Seize the Day!", by Gene Beaudet, Nov 30 p 3

Brazil's Billion-Dollar Steel Baby, by G. J. McManus,, Nov 2 p 44

South Bend Lathe:

Lathes Skirmish in Low-Cost Market, by J. E. Sandford, Sept 28 p 38

Tool Show's Second Week Draws Fat Wallets, by K. W. Bennett, Sept 21 p 47

Southwire Co.:

New Technology Triggers Copper Marketing Battle, by James Beizer, Dec 21 p 36

Spain

Ford Will Build in Taiwan—Speculation Now Shifts to Spain, Dec 7 p 27

Sperry Rand Holland NV

Computer Hierarchy Governs Dutch Steel, by A. M. Greene, July 27 p 56

Sporting Equipment

Metals Volley for Top Tennis Seeding, by T. C. DuMond, Aug 31 p 32

Stainless Steel

New Stainless Strong, Resistant to SCC, July 13 p 33

Russian ESR Goes on Stream in Sweden, by P. J. Mullins, Dec 7 p 87

Stainless Bars Put to Screw Machine Test, by B. D. Wakefield, Nov 23 p 90

Steam Replaces Argon in Swedish Stainless Process, by P. J. Mullins, Nov 9 p 71

Steel Summary: Is Stainless Due for a Boost? July 20 p 65

Vacuum Draws Down Carburizing Time, by T. C. DuMond, Sept 7 p 100

Water Replaces Argon in Stainless Converter, Oct 5 p 27

What's Behind Freeze on Stainless Prices? by G. J. McManus, Sept 21 p 45

Who—If Anyone—Will Pay New Nickel Prices? by G. J. McManus, Sept 14 p 53

Will Industry Demand ESR Quality in Carbon Steels? by R. R. Irving, Aug 3 p 69

Windfall Drops Changes in Stainless Lap, by J. M. Beattie and G. J. McManus, July 20 p 35

Stal-Laval Turbin AB (Sweden)

The Future Shock in Manufacturing, by J. E. Sandford, Aug 24 p 75

Stampings

Automakers Bank on Blanks to Cut Scrapage, by G. J. McManus, Aug 24 p 71

Stamping Flaws Easily Spotted on TV Screen, July 6 p 21

Standard Alliance Industries, Inc.:

Profit Picture: Pleased as Punch, by J. M. Beattie, Nov 2 p 42

Standard Pressed Steel Co.:

Priorities Can Turn a Company Around, by J. M. Beattie, Aug 10 p 48

Profit Picture: Pleased as Punch, by J. M. Beattie, Nov 2 p 42

Standard Steel Div.:

Tape Control Brings Efficiency to Forging, Aug 17 p 51

Standards

Detroit's Auto-Parts Diet Struggles, by R. A. Guiles, Oct 19 p 79

Metric Conversion: Inching Closer Toward Reality? by K. A. Kaufman, Aug 17 p 21

Metric System Millimetres its Way to Adoption by J. J. Obrzut, July 13 p 72

World Trade: The Millimeter Monster and Others, by J. M. Beattie, Oct 26 p 35

Stanray Corp.:

Caution Light Slows RR Recovery, by K. W. Bennett, Aug 3 p 58

Star Mfg. Co.:

Metals Builders Build a Boom, by K. W. Bennett, Aug 24 p 65

Starcraft Div.:

Automakers' New Sales, Road—Rec Vehicles, by R. A. Guiles, Sept 28 p 42

Steel

Appliances: Steel Tries to Brake Plastics Trend, by G. J. McManus, Aug 10 p 39

Bearing Steel Can Outperform Higher Alloys, Dec 21 p 51

Bending Roll Forms 14-In. Steel Plate, Sept 14 p 64

Burning Wastes Test Mettle of Materials, by T. C. DuMond, Aug 10 p 52

Computer Hierarchy Governs Dutch Steel, by A. M. Greene, July 27 p 56

Continuous Cold Forming is Now One Step Closer, by G. J. McManus, Sept 21 p 60

Foreign Inflation: U.S.'s New Trade Ally? by G. J. McManus, Aug 3 p 59

Fracture Toughness is No Accident, by R. R. Irving, Oct 19 p 91

How Can Steel Use Virtual Storage in its Computers? Aug 31 p 39

Laclede Rollback: Pricing's Guinea Pig? by G. J. McManus, July 27 p 47

The Midi-Mill: It's a Different Ball Game, by G. J. McManus, Sept 7 p 95

New Process Plates Composite Coating on Auto Parts, by W. G. Patton, Aug 17 p 50

Plastics Will Not Steel the Show in 1973 Models, by R. A. Wilson, Aug 24 p 25

Plate Steels Score Breakthrough in Quality, by R. R. Irving, Oct 12 p 50

Ruhr District Diversity Saved Economy, Says Study, Oct 26 p 23

Safety Bumps Up High-Strength Steel Stock, by R. A. Guiles, Nov 16 p 20

Seashore Test Lot Has No Mercy on Metals, by J. J. Obrzut, Oct 19 p 94

Simple Test Checks Formability of Steels, Aluminum, Oct 19 p 27

Steel Hikes to be Scattered Throughout '73, by G. J. McManus, Sept 21 p 45

Steel Summary: L-D Output Grows, Except in U.S., Nov 2 p 65

Steel Summary: Price Hikes and Profits Problems, Dec 7 p 117

Steel Summary: A Price Increase for Every Reason, Nov 30 p 65

Thought Dead, Buy American Specialty Steel Bill Lives, by K. A. Kaufman, Oct 19 p 81

Treasury Investigates Charge of Mexican Plate Dumping, Oct 12 p 67

U.S. Steel Shocks Industry with Price Hike, by G. J. McManus, Nov 23 p 61

USS Keeps it 'All in the Family', by G. J. McManus, Dec 7 p 67

Vacuum Draws Down Carburizing Time, by T. C. DuMond, Sept 7 p 100

Will Industry Demand ESR Quality in Carbon Steels? by R. R. Irving, Aug 3 p 69

Yes, You Can Price Steel Orders by Computer, by P. J. Cathey, Dec 14 p 56

Steel Co. of Canada, Ltd.:

Canada Plans Mill for Arctic Pipeline, Aug 10 p 55

Steel Industry

Are Price Controls Out of Control? by G. J. McManus, Dec 14 p 48

Brazil's Billion-Dollar Steel Baby, by G. J. McManus, Nov 2 p 44

Computer Hierarchy Governs Dutch Steel, by A. M. Greene, July 27 p 56

Controversial 'Buy American' Clause Splits House of Steel, by K. A. Kaufman, Oct 5 p 69

Costs, Not Prices, Just Took a Jump, Aug 10 p 65

EPA vs. Mills: Costs are in Eye of Beholder, by G. J. McManus, Oct 12 p 43

Ecological Hangups Erode Heavy Steel's Market, by G. J. McManus, Aug 17 p 34

Import Quantities Dip, but the Quality Grows, Oct 5 p 121

Justice Wants Suit Against Steel Quotas Put on Scrap Heap, by K. A. Kaufman, Sept 14 p 25

The Midi-Mill. It's a Different Ball Game, by G. J. McManus, Sept 7 p 95

Nixon Has 'Positive Enthusiasm,' Steel Leaders Believe, by H. R. Neal and G. J. McManus, Nov 16 p 57

Price Relief—Can Steel Dent Commission's Wall? by G. J. McManus, Aug 24 p 67

Profit Picture: Pleased as Punch, by J. M. Beattie, Nov 2 p 42

Shutdowns: One Company's Loss is Another's Gain, by G. J. McManus, Nov 23 p 61

Steel Earnings: The Only Way to Go is Up, by G. J. McManus, Aug 3 p 55

Steel Hikes to be Scattered Throughout '73, by G. J. McManus, Sept 21 p 45

Steel Output Boost Mostly a Bust? by G. J. McManus, Dec 21 p 40

Steel Slices Gripe Time to a Nub, by G. J. McManus, Aug 17 p 40

Steel Summary: Bigger and Better in 1973? Dec 14 p 81

Steel Summary: Consumers Strong, Industrials Gain, Oct 5 p 121

Steel Summary: Demand Continues to Show Gains, Aug 17 p 59

Steel Summary: Fingers Crossed on 'Super Year', Nov 23 p 113

Steel Summary: Going to Get Better in '73, Dec 21 p 58

Steel Summary: How Close are Mills to Capacity Pinch? Oct 19 p 129

Steel Summary: Is Stainless Due for a Boost? July 20 p 65

Steel Summary: Looking Ahead for Price Relief, Aug 24 p 115

Steel Summary: Market Regains its Strength, Oct 26 p 67

Steel Summary: Not Too Bad a Second Half, Aug 31 p 43

Steel Summary: Now it's Onward and Upward, Sept 7 p 139

Steel Summary: October Opens on Strong Note, Oct 12 p 67

Steel Summary: On the Brink of a Boom? Aug 3 p 83

Steel Summary: 100 Million Tons Possible in 1973, Nov 16 p 93

Steel Summary: Price Hikes and Profits Problems, Dec 7 p 117

Steel Summary: A Price Increase for Every Reason, Nov 30 p 65

Steel Summary: Right Direction, Wrong Speed, Sept 21 p 79

Steel Summary: Rising Demand, Costs Don't Buoy Prices, Nov 9 p 85

Steel Summary: Shipments to Hit '72 High in October, Sept 14 p 68

Steel Summary: Sticking to the Early Forecasts, July 13 p 95

Steel Summary: With July Gone, the Worst is Over, July 27 p 67

Steel Summary: World-Steel Trade Weighs on Deficit, July 6 p 51

Steel Summary: Year Won't be Up to Expectations, Sept 28 p 61

U.S. Steel Shocks Industry with Price Hike, by G. J. McManus, Nov 23 p 61

USS Keeps it 'All in the Family', by G. J. McManus, Dec 7 p 67

Why Not Try a Profit Increase Instead of a Price Increase? by G. J. McManus, Aug 17 p 37

World Steelmen Fret About Overcapacity Ulcer, by Gene Beaudet, Oct 19 p 77

Steelmaking

Canada Plans Mill for Arctic Pipeline, Aug 10 p 55

Computer Harmonizing Cuts Steel Costs, by B. D. Wakefield, Aug 31 p 34

Continuous Cold Rolling is Now One Step Closer, by G. J. McManus, Sept 21 p 60

Continuous Steelmaking Turns a Corner, by G. J. McManus, July 20 p 51

Ecology's Latest Sacrifice: Burned No. 2 Bundles? by K. W. Bennett, Aug 31 p 28

The Midi-Mill: It's a Different Ball Game, by G. J. McManus, Sept 7 p 95

Plate Steels Score Breakthrough in Quality, by R. R. Irving, Oct 12 p 50

Russian ESR Goes on Stream in Sweden, by P. J. Mullins, Dec 7 p 87

Russia's Technology Curtain to be Raised? by J. M. Beattie, Aug 24 p 69

Sheet Processing Done Continuously on New Line, Dec 21 p 25

Slab Casters Turn it On at McLouth Steel, by G. J. McManus, Nov 30 p 51

Steel Summary: L-D Output Grows, Except in U.S., Nov 2 p 65

Steelmakers Pin Hopes on Formed Coke, by G. J. McManus, Nov 2 p 52

Steam Replaces Argon in Swedish Stainless Process, by P. J. Mullins, Nov 9 p 71

Tired Old Cupolas Rely on Oxygen for a Second Wind, Dec 21 p 52

Water Replaces Argon in Stainless Converter, Oct 5 p 27

Will Industry Demand ESR Quality in Carbon Steels? by R. R. Irving, Aug 3 p 69

Will SIP Add New Zip to Tired Openhearths? by J. M. Beattie, Aug 31 p 27

Will U.S. Mills Swallow SIP? Nov 23 p 63

Steel Summary—Weekly Appraisal of Marketing and Production

Steigerwald-Krauss-Maffei, GmbH

Electron Beams Broaden their Metalworking Use, by Raymond Shah, Sept 28 p 47

Stellite Div.:

Exotic Alloys Come Back with Gas Turbines, by B. D. Wakefield, July 6 p 40

Parts "Born-to-Shape" for Economy, by T. C. DuMond, Oct 5 p 79

Stresskin Products Co.:

The Future Shock in Manufacturing, by J. E. Sandford, Aug 24 p 75

Stresskin Lightens the Supersonic Load, by J. E. Sandford, July 6 p 45

Strippit Div.:

Punch Press Builders Go All the Way with NC, by B. D. Wakefield, Nov 23 p 87

Struckhoff Engineering & Sales Co.:

Machining's Exotic Sleeper Comes on Strong, by K. W. Bennett, Sept 7 p 87

Structural Analysis

Fracture Toughness is No Accident, by R. R. Irving, Oct 19 p 91

Structural Dynamics Research Corp.:
Dynamic Stiffness: A Performance Parameter, by R. A. Wilson, Dec 7 p 83

Structures
Dynamic Stiffness: A Performance Parameter, by R. A. Wilson, Dec 7 p 83

Sulfuric Acid
Waste Acid to be Recovered and Reused, Aug 3 p 31

Sundstrand Machine Tool Co.:
Common Materials Give Rankine an Edge, by B. D. Wakefield, Sept 28 p 53
DNC Lines Link Cutting to New Future, by J. E. Sandford, Oct 26 p 46
Fluxless Aluminum Soldering Heads for Production Line, by J. J. Obrzut, Dec 21 p 55
MT Show: The Global Scent of Fresh Sales Blood, by K. W. Bennett, Sept 14 p 49
Soft-Wired Control Builder Sets Sight on Lathe Market, by B. D. Wakefield, Sept 7 p 102

Superior Oil Co.:
New Nickel Capacity in Oversupply Period? by James Beizer, July 27 p 49

Supersteel Products Corp.:
Punch Press Builders Go All the Way with NC, by B. D. Wakefield, Nov 23 p 87

Sweden
Russian ESR Goes on Stream in Sweden, by P. J. Mullins, Dec 7 p 87
Steam Replaces Argon in Swedish Stainless Process, by P. J. Mullins, Nov 9 p 71
Water Replaces Argon in Stainless Converter, Oct 5 p 27
Will Industry Demand ESR Quality in Carbon Steels? by R. R. Irving, Aug 3 p 69

Swindell-Dressler Co.:
Furnace Economics Expand Mini-Mills, by G. J. McManus, and K. W. Bennett, Dec 14 p 50
U.S.-Soviet Trade: Penpals Without Any Pens? by R. A. Wilson, Nov 30 p 42
VIP Soviet Trade Bait Draws Early Bites, by K. A. Kaufman and G. J. McManus, Oct 26 p 34

Sydney Steel Corp.:
Will SIP Add New Zip to Tired Openhearths? by J. M. Beattie, Aug 31 p 27
Will U.S. Mills Swallow SIP? Nov 23 p 63

Synthetic Gas
Synthetic Gas: It's a Natural, by K. W. Bennett, Aug 10 p 42

Systematic Achievement Corp.:
Motivation: What You Want is What You Get, by R. A. Guiles, Nov 2 p 46

T

TRF Industries, Inc.:
Round Two: Safety Rules Coming for Recreational Vehicles, by R. A. Guiles, Sept 14 p 55

TRW, Inc.:
TRW: Trying to Plug Aerospace Know-How into Detroit Iron, by R. A. Guiles, Dec 21 p 22

TRAVCO Group
Round Two: Safety Rules Coming for Recreational Vehicles, by R. A. Guiles, Sept 14 p 55

Taiwan
Ford Will Build in Taiwan—Speculation Now Shifts to Spain, Dec 7 p 27

Talledega Foundry & Machine Co.:
Foundries Heat Up for Demand Push, by R. A. Wilson, Oct 5 p 65

Tankers
See Also: Shipbuilding
The LNG Boom: Up, Up and Then Down? by J. M. Beattie, Oct 5 p 71
Norway Builds the Pressure-Vessel Tanker, by R. R. Irving, Aug 17 p 46

Tanks, Storage
LNG Tanks Gain Big Margin of Safety from Wire Girdle, by J. J. Obrzut, Aug 17 p 48
Wire-Wrapped LNG Storage Tanks Withstand Impact, Aug 10 p 29

Tann Co.:
Skills Attrition Stifles T&D Shop Revival, by R. A. Wilson, Sept 28 p 36

Taxes
Cohen Strongly Defends ADR, 7 Pct Tax Credit, by K. A. Kaufman, Oct 5 p 21
Hit 'Em! Drag 'Em Down! Kick 'Em! by Gene Beaudet, Aug 10 p 5
McGovern Mellowing Tough Stand on Business Laws, by K. A. Kaufman, July 27 p 21
Nixon and Congress: Four-Year Money Fight? by K. A. Kaufman, Nov 16 p 55
Pollution Tax: A Matter of Market Control, by C. J. Suchocki, Aug 10 p 27
Public Hostile by Any Tax Hike, Congress Warned, by K. A. Kaufman, Aug 3 p 25
Reubin—Have One on Us, by Gene Beaudet, July 20 p 5
Sometime, After the Politics, There Will Be a Tax Increase, by K. A. Kaufman, July 6 p 16
VAT: Basics on a Possible Tax-in-Waiting, by J. D. Baxter, Nov 30 p 47
Value-Added Tax: Trial Balloons Develop Leaks, by K. A. Kaufman, Sept 28 p 21
Well, They Asked for an Opinion, by Gene Beaudet, Sept 7 p 5

Taylor Devices Co.:
Can Detroit's Wand Turn Federal Safety Beast into a Beauty? by R. A. Guiles, Nov 6 p 27

Tech-Etch, Inc.:
Chemical Milling Grabs New Lease on Life, by K. W. Bennett, Oct 12 p 41

Techfront—Weekly Analysis of New Developments in the Metalworking and Related Industries

Technology
Automation: Spreading Technology Too Thin? by J. E. Sandford, Dec 7 p 69
Make Consultants Give You Results—Not Big Studies, Oct 5 p 75
New Technology Triggers Copper Marketing Battle, by James Beizer, Dec 21 p 36
Russia's Technology Curtain to be Raised? by J. M. Beattie, Aug 24 p 69

Teflon
Burning Wastes Test Mettle of Materials, by T. C. DuMond, Aug 10 p 52
Parts Work Harder—and Longer—If Teflon-Anodized, by B. D. Wakefield, Oct 19 p 97

TekTran Co.:
Space Age Welding Tackles Axle Housings, Nov 9 p 67

Teledyne Continental Motors Corp.:
Little Planes Lift Aero Market, by K. W. Bennett, Aug 31 p 25

Teleflex, Inc.:
Ceramic Coating System Controls Heat Flow, Sept 14 p 66

Television
Stamping Flaws Easily Spotted on TV Screens, July 6 p 21

Telex Corp.:
Computer - Memory Technology Takes a Bigger Byte, by K. W. Bennett, Aug 10 p 43

Tenneco, Inc.:
Farm Equipment: The Lush Years Return, by K. W. Bennett, July 27 p 44
The LNG Boom: Up, Up and Then Back Down? by J. M. Beattie, Oct 5 p 71

Terex Corp.:
GM Reincarnates in Off-Road Haulers as Terex, by R. A. Wilson, Aug 10 p 45

Testing & Inspection
Gases Check Weld Soundness of Auto Parts, Nov 2 p 53
Isolators Add Precision to Presswork, by B. D. Wakefield, Aug 31 p 36
Stamping Flaws Easily Spotted on TV Screens, July 6 p 21

Texas Gas Transmission Corp.:
Barter Surfaces as International Trade Tool, by I. G. Black, Nov 2 p 39

Textron Co.:
Magnesium: There's Action in Them Thar Hills, by R. R. Irving, Nov 9 p 64

Thermal Research & Engineering Corp.:
Compact Burner Churns Out Heat Fast, by J. J. Obrzut, Nov 23 p 91

3M Co.:
Powder Coating: 'A Finisher's Finish,' by J. J. Obrzut, Nov 16 p 67

Timken Co.:
Furnace Economics Expand Mini-Mills, by G. J. McManus and K. W. Bennett, Dec 14 p 50

Tin
Spot Tin Prices: Are They Really on the Up and Up? by James Beizer, Sept 14 p 89

Titanium
Alloy with a Memory Spurs Design, Oct 5 p 86
Diffusion Bonding Joins Titanium for Atom Smasher, Oct 26 p 53

Titanium Metals Corp. of America
Alloy with a Memory Spurs Design, Oct 5 p 86
Tape Control Brings Efficiency to Forging, Aug 17 p 51

Tool and Die Industry
'Do it Yourself' Russian Trade, by D. N. Williams July 6 p 27
Plastic Metals Offer Flexibility in Tooling, Aug 17 p 52
Skills Attrition Stifles T&D Shop Revival, by R. A. Wilson, Sept 28 p 36

Tool Steel Gear and Pinion Co.:
Bull Gear Flexing Won't Bully New Drive, by R. A. Wilson, Sept 7 p 101

Towmotor Div.:
Towmotor Follows the Track of the Cat, by R. A. Wilson, Dec 14 p 67

Toyo Kogyo
When Wankel Puts It All Together—Watch Out—by D. N. Williams, Aug 3 p 61

Toyota Motor Distributors (USA), Inc.:
Multinationalism: Industry and Labor Go Begging, by R. A. Guiles, Nov 2 p 19

Tracks (Railroads)
Steel-Tied Panels Make Tracks in Rail Market, Aug 10 p 55

Training Programs
Grease Monkey: Auto Jungle's Dying Species, by R. A. Guiles, Sept 28 p 22

Trans Union Corp.:
Caution Light Slows RR Recovery, by K. W. Bennett, Aug 3 p 58

Transmissions
Borg-Warner's New Transmissions Shot from Guns, by R. A. Guiles, Nov 7 p 25

Transport and General Works Union (British)
British Labor: Does Lords' Know What's Happening? Aug 3 p 29

Transportation
Fight Over Boxcars Keeps on Rollin' Along, by K. A. Kaufman, Aug 17 p 21
Going for the Jugular in Mass Transit? by J. M. Beattie, July 27 p 41
Hey You, the Computer Says Your Bus Is Here, by D. N. Williams, July 6 p 20

Travco Div.:
Automakers' New Sales Road—Rec Vehicles, by R. A. Guiles, Sept 28 p 42

Trucks
Future Trucks Will Not Automatically be Stick-Shifts, by R. A. Guiles, Oct 5 p 23
Truck Sales Keep on 'Truckin', by R. A. Guiles, Dec 21 p 38
Turbine Trucks: Gimmick or Godsend? by R. A. Guiles, Dec 14 p 52

Trumpf America, Inc.:
Punch Press Builders Go All the Way with NC, by B. D. Wakefield, Nov 23 p 87

Tubing
Hydrostatic Pressure Turns Tubing into Thin-Walled Tanks, Nov 2 p 51
Tubes Expanded by Explosives, Aug 3 p 75
Ultrasonics Rids Flux from the Soldering of Aluminum Tubing, Aug 31 p 35

Turbines
Turbine Trucks: Gimmick or Godsend? by R. A. Guiles, Dec 14 p 52

Turbodyne Corp.:
Exotic Alloys Come Back with Gas Turbines, by B. D. Wakefield, July 6 p 40

Turbo Power & Marine Systems Co.:
Exotic Alloys Come Back with Gas Turbines, by B. D. Wakefield, July 6 p 40

Tydeman Machine Works, Inc.:
Small Builder Rides the 'Edge of Accuracy', by J. E. Sandford, July 27 p 60

Tymac Div.:
Small Builder Rides the 'Edge of Accuracy', by J. E. Sandford, July 27 p 60

U

USM Corp.:
Large Lathes Don't Have to be Noisy, by R. A. Wilson, Dec 21 p 48

U.S.S.R.
American Robots May Invade Soviet Union—Via Japan, Nov 23 p 29
'Do It Yourself' Russian Trade, by D. N. Williams, July 6 p 27
MT Builders Eye $5 Billion Soviet Market, by Gene Beaudet, Nov 9 p 58
MT Show: The Global Scent of Fresh Sales Blood, by K. W. Bennett, Sept 14 p 49
No Time to Catch Up on Our Z's, by Gene Beaudet, July 13 p 5
Red Lend-Lease Pact Opens Trade for U. S., Sept 21 p 46
Red-Minerals Goal: A Five-Fold, 30-Year Plan, by James Beizer, Sept 21 p 80
Russian ESR Goes on Stream in Sweden, by P. J. Mullins, Dec 7 p 87
Russians are Coming this Fall to Talk About Trade Pact!, by K. A. Kaufman, Aug 24 p 23
Russia's Technology Curtain to be Raised? by J. M. Beattie, Aug 24 p 69
Soviet Technology: Is this the Start of Something More? by James Beizer, Aug 31 p 45
U. S.-Soviet Trade: Peanuts Without Any Pens? by R. A. Wilson, Nov 30 p 42
U. S.-Soviet Trade Talks are Getting Down to the Basics, by K. A. Kaufman, July 20 p 19
VIP Soviet Trade Bait Draws Early Bites, by K. A. Kaufman and G. J. McManus, Oct 26 p 34
Will Industry Demand ESR Quality in Carbon Steels? by R. R. Irving, Aug 3 p 69

U. S. Atlas Fabricators, Inc.:
Multinationalism: Industry and Labor Go Begging, by R. A. Guiles, Nov 2 p 19

U. S. Bureau of Domestic Commerce
World Trade: The Millimeter Monster and Others, by J. M. Beattie, Oct 26 p 35

U. S. Bureau of Mines
Customer Grumblings Crowd Mills into Steel Scrap Changes, by G. J. McManus, Nov 16 p 60
Safety: You Can't Always Go by the Book, Oct 19 p 21

U. S. Chamber of Commerce
Worker Benefits: Business Tabbed Key to Reform, Dec 14 p 17

U. S. Coast Guard
Great Lakes Shipping: Damn the Ice, Full Speed Ahead, by R. A. Guiles, Dec 14 p 53

U. S. Department of Commerce
The LNG Boom: Up, Up and Then Back Down? by J. M. Beattie, Oct 5 p 71
Russians are Coming this Fall to Talk About Trade Pact!, by K. A. Kaufman, Aug 24 p 23
U. S.-Soviet Trade Talks are Getting Down to the Basics, by K. A. Kaufman, July 20 p 19

U. S. Department of the Interior
What Ya Gonna Do When the (Oil) Well Runs Dry? by R. A. Guiles, Nov 16 p 23

U. S. Department of Justice
Justice Wants Suit Against Steel Quotas Put on a Scrap Heap, by K. A. Kaufman, Sept 14 p 25
Product Liability: Industry's Newest Tax? by I. G. Black, Aug 31 p 23

U. S. Department of Labor
DOL Sets Reelection Terms While Boyle Sweats Appeal, July 13 p 25
Mr. Brennan, Look at It This Way, by Gene Beaudet, Dec 7 p 3
Nixon Plucks 'Hard Hat' for His Labor Man, Dec 7 p 21
OSHA Pushes On But States Lag in Setting Job Safety Plans, Nov 30 p 21

U. S. Department of the Treasury
Treasury Asks for Power to Stem Cargo Thievery, by K. A. Kaufman, Aug 10 p 23

U. S. Industries, Inc.:
Bending Roll Forms 14-In. Steel Plate, Sept 14 p 64
MT Show: The Global Scent of Fresh Sales Blood, by K. W. Bennett, Sept 14 p 49

U. S. Naval Research Laboratory
Fracture Toughness is No Accident, by R. R. Irving, Oct 19 p 91

U. S. Philips Co.:
Stirling Engines: A Golden Oldie, but is it Sterling? by R. A. Wilson, Aug 17 p 23

U. S. Steel Corp.:
Appliances: Steel Tries to Brake Plastics Trend, by G. J. McManus, Aug 10 p 39
Are Price Controls Out of Control? by G. J. McManus, Dec 14 p 48
Brazil's Billion-Dollar Steel Baby, by G. J. McManus, Nov 2 p 44
Controversial 'Buy American' Clause Splits House of Steel, by K. A. Kaufman, Oct 5 p 69
Customer Grumblings Crowd Mills Into Steel Scrap Changes, by G. J. McManus, Nov 16 p 60
Furnace Economics Expand Mini-Mills, by G. J. McManus and K. W. Bennett, Dec 14 p 50
Industry and Agnes: Only the Ark Was Missing, by J. M. Beattie, G. J. McManus and D. N. Williams, July 6 p 29
Is U. S. Steel Out to Obsolete the Scrap Broker? Oct 5 p 124
Manufacturers Up Output with Less Workers, by G. J. McManus, Sept 14 p 52
Metals Looks for a Home in Housing, by R. A. Wilson, Nov 9 p 56
The Midi-Mill: It's a Different Ball Game, by G. J. McManus, Sept 7 p 95
New Entries Enrich Coalgas Interest, by G. J. McManus, July 6 p 28
Nixon Has 'Positive Enthusiasm', Steel Leaders Believe, by H. R. Neal and G. J. McManus, Nov 16 p 57
Pipeline Charging for Coke May Get Push from U. S. Steel, by G. J. McManus, July 13 p 67
Safety: You Can't Always Go by the Book, Oct 19 p 21
Shutdowns: One Company's Loss is Another's Gain, by G. J. McManus, Nov 23 p 61
Steel Earnings: The Only Way to Go is Up by G. J. McManus, Aug 3 p 55
Steel Output Boost Mostly a Bust? by G. J. McManus, Dec 21 p 40
Steel Slices Gripe Time to a Nub, by G. J. McManus, Aug 17 p 40
Steel Summary: Consumers Strong, Industrials Gain, Oct 5 p 121
Steel Summary: A Price Increase for Every Reason, Nov 30 p 65
Steelmakers Pin Hopes on Formed Coke, by G. J. McManus, Nov 2 p 52
Steelworkers: Productivity Push Gets Pushed Around, Nov 30 p 17
Treasury Investigates Change of Mexican Plate Dumping, Oct 12 p 67
USS Coke Ovens: Steel's Reluctant Leader, by G. J. McManus, Oct 5 p 67
USS Keeps it 'All in the Family', by G. J. McManus, Dec 7 p 67
Will Pipe Hit Gusher from Renewed Oil-Field Activity? by G. J. McManus, Sept 21 p 48
Will U. S. Mills Swallow SIP? Nov 23 p 63

U. S. Steel Homes Div.:
Metals Looks for a Home in Housing, by R. A. Wilson, Nov. 9 p 56

U. S. Supreme Court
Computer Patent Battle Goes from Court to Congress, by K. A. Kaufman, Nov 30 p 45
Picket Line Support No Cause to Fire, High Court Says, by K. A. Kaufman, Nov 16 p 19

Uddeholm AB (Sweden)
Steam Replaces Argon in Swedish Stainless Process, by P. J. Mullins, Nov 9 p 71
Water Replaces Argon in Stainless Converter, Oct 5 p 27

Udylite Co.:
Bumpers Reflect Bright '73 for Platers, by J. J. Obrzut, Dec 14 p 68

Ultrasonics
Fluxless Aluminum Soldering Heads for Production Line, by J. J. Obrzut, Dec 21 p 55
Ultrasonics Rids Flux from the Soldering of Aluminum Tubing, Aug 31 p 35

Ultraviolet Radiation
EB, UV Markets Take Off—but Not for Metals, by B. D. Wakefield, Oct 5 p 66

Unicote Corp.:
Powder Coating: 'A Finisher's Finish', by J. J. Obrzut, Nov 16 p 67

Union Carbide Corp.:
The Finest Cutting You'll Ever See, Dec 7 p 85
Getting Lathes Turning with the Super Tool, by R. A. Wilson, July 20 p 47
Packaging Adds Cost Appeal to NC, by J. E. Sandford, July 20, p 52
Plasma Torches Seek New Role in Vacuum Melting, Sept 14 p 64

United Aircraft Corp.:
Exotic Alloys Come Back with Gas Turbines, by B. D. Wakefield, July 6 p 40
Laser Welding Comes Back to Life, Oct 12 p 55
Lasers Challenge Electron Beam Welding in Speed, Quality, by B. D. Wakefield, Dec 7 p 88

United Auto Workers
GM Strikes: Now You See Them, Now You Don't, Oct 26 p 17
Guardian Angels Descend on UAW Local Coffers, July 13 p 25
Monotony: Labor's Liveliest Issue in '73? by R. A. Guiles, Dec 7 p 77
Multinationals: Industry and Labor Go Begging, by R. A. Guiles, Nov 2 p 19
Now, At This Inconvenient Time—Strikes Hit GM, by R. A. Guiles, Nov 2 p 40
Skills Attrition Stifles T&D Shop Revival, by R. A. Wilson, Sept 28 p 36
UAW Scales Olympian Heights in Car-Pricing, Sept 21 p 19
UAW's "Mad at GMAD" Act Runs its Course, Nov 23 p 23
Woodcock Wracks Automakers Over Profiteering, Oct 19 p 5

United Brewery Workers
Beer Union to Teamsters: 'Have One With Us!' Aug 3 p 5

United Kingdom
Britain's Controls Inject Some Pep—and Some Concern, Nov 23 p 29
British Labor: Does Lords' Know What's Happening? Aug 3 p 29
Drumming Up Some Business at a Machine Tool 'Sale', July 20 p 23
The Future of Forging: Help! by J. M. Beattie, Oct 12 p 44
Lockheed's Future Boosted by British TriStar Order, Aug 17 p 24
World Steelmen Fret About Overcapacity Ulcer, by Gene Beaudet, Oct 19 p 77

United McGill Corp.:
Gas-Fired Melting Cleans Up Foundries, Oct 26 p 53

United Mineworkers of America
DOL Sets Reelection Terms While Boyle Sweats Appeal, July 13 p 25
UMW Election: A Good Chance for Reform, by C. J. Suchocki and G. A. Weimer, Dec 21 p 19

United States Pipe & Foundry Corp.:
At the Casters, When It Rains Orders it Pours, by K. W. Bennett, Nov 30 p 39

United Steelworkers of America
Canadian Labor Settlement: Not Only Nickles and Dimes, by J. M. Beattie, July 13 p 97
Steel Output Boost Mostly a Bust? by G. J. McManus, Dec 21 p 40
Steel Slices Gripe Time to a Nub, by G. J. McManus, Aug 17 p 40
Steelworkers: Productivity Push Gets Pushed Around, Nov 30 p 17
USWA: Politics Upstages Issues, by G. J. McManus, Sept 28 p 40
USWA Stands by George—As In Meany, by George! Aug 10 p 21

Univac Div.:
Computer Hierarchy Governs Dutch Steel, by A. M. Greene, July 27 p 56

Universal-Cyclops Specialty Steel Div.:
Nonmetallic Coating Shows Promise for Cold-Heading Wire, July 27 p 59
Parts "Born-to-Shape" for Economy, by T. C. DuMond, Oct 5 p 79

Universal Metal Finishing Div.:
Coating Extends Aluminum Potential, Sept 28 p 54

University of Chicago
Will Success Spoil Inflation Controls? by K. W. Bennett, Dec 21 p 42

University of Michigan
Economic Index: Breadwinners Say it's Getting Better, by D. N. Williams, July 27 p 45
Move Over, Santa, '73s Got its Own Bag of Goodies, by R. A. Guiles, Nov 23 p 64
Wankel on the Way, But Good Ol' V-8 Isn't Doomed Yet, by R. A. Guiles, Dec 14 p 21
What Black Capitalism Needs More than Anything, Dec 14 p 25
What You Gonna Do When the (Oil) Well Runs Dry? by R. A. Guiles, Nov 16 p 23
The Yen Looks to Value—Up—and Japan's Not Happy, by R. A. Guiles, Dec 7 p 72

University of Pennsylvania
College Grads Find Corporate Recruitment Changed, Nov 30 p 49

University of Utah
Red-Minerals Goal: A Five-Fold, 30-Year Plan, by James Beizer, Sept 21 p 80

University of Wisconsin
Great Lakes Shipping: Damn the Ice, Full Speed Ahead, by R. A. Guiles, Dec 14 p 53

Used Machinery — Clearing House for Variety of Not-So New Equipment

V

Vacuum Technology
Plasma Torches Seek New Role in Vacuum Melting, Sept 14 p 64
Sealing Method Expands Usage of PM, Die Cast Parts, Nov 30 p 57
Vacuum Draws Down Carburizing Time, by T. C. DuMond, Sept 7 p 100

Van Deusen Aircraft Supply Co.:
Little Planes Lift Aero Market, by K. W. Bennett, Aug 31 p 25

Vertol Div.:
Going for the Jugular in Mass Transit? by J. M. Beattie, July 27 p 41

Vibration
The Finest Cutting You'll Ever See, Dec 7 p 85
Isolators Add Precision to Presswork, by B. D. Wakefield, Aug 31 p 36
Vibration Couldn't Shake this Bolt Loose, by J. J. Obrzut, Sept 21 p 59

Vibro/Dynamics Corp.:
Isolators Add Precision to Presswork, by B. D. Wakefield, Aug 31 p 36

Volkswagen AG
The Future Shock in Manufacturing, by J. E. Sandford, Aug 24 p 75
Who Pays for Recall Defect Repair? VW Case May Decide, by R. A. Guiles, Dec 7 p 25

W

Wabco Corp.:
Turbine Trucks: Gimmicks or Godsend? by R. A. Guiles, Dec 14 p 52

Wages and Prices
Are Controls Heading U. S. into New Inflation? by K. A. Kaufman, Dec 21 p 21
Britain's Controls Inject Some Pep—and Some Concern, Nov 23 p 29
Construction Wages are Under Control? by G. J. McManus, Oct 12 p 46
Control Blitz Keys on Prices, Not Wages, by K. A. Kaufman, Aug 24 p 67
Controls Here to Stay? Forever, by Gene Beaudet, Nov 9 p 5
Controls: Pay Board Head Opts for an Extension, Nov 23 p 23
Controls Working but Burns Urges More, by K. A. Kaufman, Aug 10 p 41
Don't Let Price Controls Throw You, July 6 p 33
Lower the Barriers at Home and Abroad, by Gene Beaudet and G. J. McManus, July 13 p 72
Mining Congress Buries Optimism, by James Beizer, Sept 21 p 50
'73 May Boom, But Continued Controls are Almost Certain, by K. A. Kaufman, Nov 23 p 65
Pay Board 'Refines' Some Wage and Salary Rules, Nov 30 p 17
Post-Election Letdown May Include Phase III Blahs, by K. A. Kaufman, Nov 9 p 57
Surprise, Surprise . . . Surprise? by J. M. Beattie, Dec 14 p 48
Wage Gains: A Far Cry from the Year Past, Nov 9 p 23
Wages: All Are Created Equal but Not in Pay, Aug 17 p 19
You Were There, What Do You Think? by Gene Beaudet, Aug 17 p 5

Warner & Swasey Co.:
Delivery Stretch May Squeeze MT Builders, by R. A. Wilson, Nov 2 p 41
Lathes Skirmish in Low-Cost Market, by J. E. Sandford, Sept 28 p 38
Low-Cost Lathe Fits Heavyweight Image, by J. E. Sandford, July 13 p 86
Punch Press Builders Go All the Way with NC, by B. D. Wakefield, Nov 23 p 87
Warner & Swasey Joins Control Builders Club, by R. A. Wilson, Sept 7 p 88
World Machine Tools: Service War? by R. A. Wilson, Aug 3 p 53

Washington News Report—Weekly Interpretation of Legislation and other Government (See Also K. A. Kaufman)

Waste Management
Antidumping Laws: Too Tough or Too Easy? Aug 31 p 14
Exporter Memo: Dump Before the Phantom Strikes, by C. J. Suchocki, July 13 p 31
Pollution Control: It's Now a Package Deal, by K. W. Bennett, Nov 9 p 60
Waste Acid to be Recovered and Reused, Aug 3 p 31
Water Treatment—Is $5 Billion Enough? Too Little, Too Late? Dec 7 p 23

Waste Management, Inc.:
Pollution Control: It's Now a Package Deal, by K. W. Bennett, Nov 9 p 60

Waterbury Farrel Co.:
Getting Lathes Turning with the Super Tool, by R. A. Wilson, July 20 p 47
Packaging Adds Cost Appeal to NC, by J. E. Sandford, July 20 p 52

Wayne State University
You're Hired, but First this Little Test? by R. A. Guiles, Oct 5 p 70

Jervis B. Webb Co.:
U.S.-Soviet Trade: Penpals Without Any Pens? by R. A. Wilson, Nov 30 p 42

Wehr Corp.:
Good Pretreatment Corrects Problems on Coating Line, Aug 3 p 74

Weirton Steel Div.:
Continuous Casting Needs Solid Instrumentation Support, Oct 12 p 56

Welding
Automatic Welding: Try It, You'll Like It, by B. D. Wakefield, Dec 14 p 66
Brittle Fractures Plague New Pipeline, Aug 3 p 72
Electron Beams Broaden Their Metalworking Use, by Raymond Shah, Sept 28 p 47
Flexible System Simplifies Annealing of Pipe Welds, Nov 2 p 54
The Future Shock in Manufacturing, by J. E. Sandford, Aug 24 p 75
Gases Check Weld Soundness of Auto Parts, Nov 2 p 53
Laser Welding Comes Back to Life, Oct 12 p 55
Lasers Challenge Electron Beam Welding in Speed, Quality, by B. D. Wakefield, Dec 7 p 88
Plasma-Mig Process Looks Promising for Welding, Overlay, July 6 p 44
Space Age Welding Tackles Axle Housings, Nov 9 p 67
3-in-1 Welding System, July 13 p 33
Upslope Welding Frees Aluminum from Porosity, Nov 2 p 27
Vertical Welding Goes into Orbit, by R. R. Irving, Oct 26 p 50

Wells Mfg. Co.:
Tool Show's Second Week Draws Fat Wallets, by K. W. Bennett, Sept 21 p 47

Westinghouse Air Brake Co.:
Foreign Fluid Power Powers Up, by K. W. Bennett, Nov 23 p 66

Westinghouse Electric Corp.:
Antidumping Laws: Too Tough or Too Easy? Aug 31 p 14
Appliances: Steel Tries to Brake Plastics Trend, by G. J. McManus, Aug 10 p 39
Exotic Alloys Come Back with Gas Turbines, by B. D. Wakefield, July 6 p 40
The Future Shock in Manufacturing, by J. E. Sandford, Aug 24 p 75
Management is Really Going Mod, by G. J. McManus, July 20 p 39
New Entries Enrich Coalgas Interest, by G. J. McManus, July 6 p 28
Politics: Strange Bedfellows Mate, by K. A. Kaufman, James Beizer, J. M. Beattie and G. J. McManus, July 20 p 33

Wheelabrator-Frye, Inc.:
Holding Companies are Losing their Grip, by G. J. McManus, Aug 3 p 56
Pollution Control: It's Now a Package Deal, by K. W. Bennett, Nov 9 p 60

Wheeling-Pittsburgh Steel Corp.:
Shutdowns: One Company's Loss is Another's Gain, by G. J. McManus, Nov 23 p 61

Wheels
Improvements in ACT Casting Method Extend its Use, Dec 14 p 27

White Motor Corp.:
Automaker's New Sales Road—Rec Vehicles, by R. A. Guiles, Sept 28 p 42
Farm Equipment: The Lush Years Return, by K. W. Bennett, July 27 p 44
GM Reincarnates in Off-Road Haulers as Terex, by R. A. Wilson, Aug 10 p 45
GM's Wankel in White's Canton Plant? by G. A. Weimer, Nov 30 p 41
Round Two: Safety Rules Coming for Recreational Vehicles, by R. A. Guiles, Sept 14 p 55
Turbine Trucks: Gimmicks or Godsend? by R. A. Guiles, Dec 14 p 52

Whitefield Paper Div.:
Steel-Tied Panels Make Tracks in Rail Market, Aug 10 p 55

W. A. Whitney Corp.:
Punch Press Builders Go All the Way with NC, by B. D. Wakefield, Nov 23 p 87

Whittaker Corp.:
Multi-Plant Firms Have Bigger OSHA Headaches, by R. A. Guiles, Oct 12 p 45

Wickes Corp.:
Productivity Gains—and OSHA—Spur Diecasting, by K. W. Bennett, Oct 26 p 37

Wickman Corp.:
Diamond Wheel Grinds "Impossible" Drill Materials, July 27 p 57

Brian B. Wilson
Product Liability: Industry's Newest Tax? by I. G. Black, Aug 31 p 23

Lee Wilson Co.:
Brazil's Billion-Dollar Steel Baby, by G. J. McManus, Nov 2 p 44

Wilson Sporting Goods Co.:
Metals Volley for Top Tennis Seeding, by T. C. DuMond, Aug 31 p 32

Winnebago Industries, Inc.:
Automakers' New Sales Road—Rec Vehicles, by R. A. Guiles, Sept 28 p 42
Extrusion Bending is a No-Scrap Operation, by R. A. Wilson, Aug 31 p 38
Round Two: Safety Rules Coming for Recreational Vehicles, by R. A. Guiles, Sept 14 p 55

Wire
Nonmetallic Coating Shows Promise for Cold-Heading Wire, July 27 p 59

Wisconsin Steel Div.:
The Midi-Mill: It's a Different Ball Game, G. J. McManus, Sept 7 p 95

Wolverine-Pentronix, Inc.:
No-Rinse Pretreatment Thwarts Pollution, Dec 7 p 90

Wyatt Div.:
Bending Roll Forms 14-In. Steel Plate, Sept 14 p 64

Wyman-Gordon Co.:
Exotic Alloys Come Back with Gas Turbines, by B. D. Wakefield, July 6 p 40

Y

Youngstown Sheet & Tube Co.:
Controversial 'Buy American' Splits House of Steel, by K. A. Kaufman, Oct 5 p 69
Ecology's Latest Sacrifice: Burned No. 2 Bundles? by K. W. Bennett, Aug 31 p 28

Z

Zambia
Nonferrous: All Nations are Not So Chile, by James Beizer, Oct 5 p 72
World Copper Stocks Up; But Whither Go Prices? by James Beizer, Oct 5 p 123

Carl Zeiss (Germany)
Electron Beams Broaden their Metalworking Use, by Raymond Shah, Sept 28 p 47

Zinc
Another Zinc Smelter Bites Emission Dust, by James Beizer, Aug 24 p 117
Don't Make Us Depend on Foreign Ores, Place Urges, by James Beizer, July 20 p 67
Zinc-Rich Coatings Enroute for Auto, Appliance Use, by K. W. Bennett, Oct 12 p 42

John Zink Co.:
Pollution Control: It's Now a Package Deal, by K. W. Bennett, Nov 9 p 60

AUTHOR INDEX

B

Baxter, J. D.

Is a New NEP Shaping Up? Nov 16 p 61

VAT: Basics on a Possible Tax-in-Waiting, Nov 30 p 47

Beattie, J. M.

The Book on OSHA Rules: Do it Anyway, Oct 19 p 17

Canadian Labor Settlement: Not Only Nickels and Dimes, July 13 p 97

Copper's Pricing Grand Master: It's Phelps Dodge Again, July 13 p 97

Energy Crisis: The Big Turn Off? Dec 7 p 70

The Future of Forging: Help! Oct 12 p 44

Going for the Jugular in Mass Transit? July 27 p 41

How to Manage People Problems, Sept 14 p 57

Industry and Agnes: Only the Ark Was Missing, July 6 p 29

Ireland: The New Gateway to the Common Market? Dec 21 p 23

The LNG Boom: Up, Up and Then Back Down? Oct 5 p 71

Machine Tools Future: The Computer Grows Up, Nov 30 p 44

Making the Corporate Partner Concept Work, July 20 p 42

New Workmen's Comp: Campaign Bait? Aug 10 p 44

Politics: Strange Bedfellows Mate, July 20 p 33

Priorities Can Turn a Company Around, Aug 10 p 48

Products Liability: Now it's Let the Seller Beware, Oct 12 p 47

Profit Picture: Pleased as Punch, Nov 2 p 42

The Race is Over, but Compensation Payoff is Held Up, July 13 p 68

Russia's Technology Curtain to be Raised? Aug 24 p 69

Surprise, Surprise . . . Surprise? Dec 14 p 48

Will SIP Add New Zip to Tired Openhearths? Aug 31 p 27

Windfall Drops Changes in Stainless Lap, July 20 p 35

Workmen's Comp and the Friday Flash, July 13 p 68

World Trade: The Millimeter Monster and Others, Oct 26 p 35

Beaudet, Gene

Archie Bunker Now Meets "Tom Smith", Aug 31 p 5

As You Say, Mr. Nixon, "Seize the Day!", Nov 30 p 3

Aw, C'Mon, Ralph, You Know Better, Oct 12 p 5

The Best Things in Life Cost Something, Sept 14 p 5

Controls Here to Stay? Forever? Nov 9 p 5

Does This Surprise You? Should It? Oct 19 p 5

Hit 'Em! Drag 'Em Down! Kick 'Em! Aug 10 p 5

"I Suppose You're Wondering . . ." You Bet, Nov 23 p 3

Is Ecology Slowing the Recovery? July 27 p 5

It May be Show Biz, But is it Good Biz? Sept 21 p 5

Lower the Barriers at Home and Abroad, July 13 p 72

MT Builders Eye $5 Billion Soviet Market, Nov 9 p 58

Mr. Allende Blames "Villains"—and to What End? Dec 14 p 3

Mr. Brennan, Look at It This Way, Dec 7 p 3

Mr. Shultz, Our Hat's Off to You! Oct 5 p 5

No Time to Catch Up on Our Z's, July 13 p 5

Now, About the Next 'Four More Years', Nov 16 p 5

Now, Does Everyone Feel Better? OK? Aug 3 p 5

Reubin—Have One on Us, July 20 p 5

Thoughts of Peace in Indochina, Nov 2 p 5

Well, They Asked for an Opinion! Sept 7 p 5

What Can You Say About Chicago? Aug 24 p 5

Where Are You When I Need You? Sept 28 p 5

Who Has a Good Thing Going? Oct 26 p 5

Why Don't They Lay Off the Sauce? July 6 p 5

World Steelmen Fret About Overcapacity Ulcer, Oct 19 p 77

Yes, But Have We Learned Anything? Dec 21 p 3

You Were There, What Do You Think? Aug 17 p 5

Beizer, James

After Nickel Labor Settles, Can a Price Hike be Far Behind? July 20 p 37

All About Silver and the Controls that Never Were? Aug 17 p 61

Allende Fixes Blame—On Everyone Else, Dec 14 p 54

Aluminum Has Trouble Making Prices Stick, Nov 16 p 95

Aluminum Industry's Convalescence Has Six Months to Go, July 27 p 69

Aluminum Invades Steel's Market in High Pressure Tanks, Nov 9 p 69

Aluminum: Only the Pricing is Still Sick, Oct 26 p 40

Aluminum Over-Capacity May Abort Price Hikes, Dec 7 p 119

Aluminum Seeks Markets to Match its Capacity, Oct 19 p 85

Aluminum Statistics Rosy, But Next Year Smells Even Better, Oct 5 p 123

Anaconda Puts its Financial House Back in Order, Aug 10 p 67

Another Zinc Smelter Bites Emission Dust, Aug 24 p 117

Auto Emission Uses Will Make Platinum Even More Precious, Nov 23 p 115

Chile Copper Grab: An International Affair? Sept 14 p 89

Chile and Kennecott Both Claim Victory but Cerro Gets Paid, Dec 7 p 71

Chilean Tribunal—Hardly a Cent for Kennecott, Anaconda, Aug 24 p 70

Copper Cartels? In Any Language it's a Loser, Dec 21 p 41

Copper Company Balances Ecology with Economy, Nov 2 p 49

Copper Consumption in '73 Should Absorb Hike in Output, Dec 7 p 119

Copper in '73—Supply, Demand and Price Trends, Oct 19 p 131

Court Slaps EPA and Lets Smelters Off Pollution Hook, Dec 14 p 83

Don't Make Us Depend on Foreign Ores, Place Urges, July 20 p 67

EPA Environment Management Blasted as 'Inadequate', Dec 14 p 23

EPA Foils Probe of Smelter Rules, Sept 7 p 89

Earnings Reports Net Only a Few, Reluctant Smiles, Nov 9 p 87

Ecology in Early Planning Necessary, Says Congressman, Sept 28 p 63

Government Deals Copper Companies Dual Blow, Sept 28 p 63

Has Amax Taken a Giant Step Toward New Smelter? Sept 7 p 141

In '73, Nickel Prices to Be Firm as Oversupply Fades, Oct 26 p 69

Mining Congress Buries Optimism, Sept 21 p 50

More About Smelters and the Environment, Aug 17 p 61

New Nickel Capacity in Oversupply Period? July 27 p 49

New Technology Triggers Copper Marketing Battle, Dec 21 p 36

Nickel Price Boost Comes as No Surprise, Sept 7 p 90

Nickel's Recovery Sets Example for Metals Companies, Nov 16 p 95

Nonferrous: All Nations are Not So Chile, Oct 5 p 72

Olin Exec Pegs Nonferrous Growth in '73 to Economy, Dec 21 p 59

Politics: Strange Bedfellows Mate, July 20 p 33

Pricing is Big Worry for Aluminum Producers, Nov 2 p 67

Primary Metals Doff Snail Image, Will Pace GNP, Study Says, Dec 21 p 59

Red-Minerals Goal: A Five-Fold, 30-Year Plan, Sept 21 p 80

Rothschilds: Buy the Suez, Form a Metals Company, Dec 21 p 44

Silver Export Boats Meeting in Mid-Atlantic? Aug 10 p 67

Slowly Nonferrous Earnings Log Gains, Aug 10 p 46

Some Strange Happenings in the Copper Market, Aug 31 p 45

Soviet Technology: Is this the Start of Something More? Aug 31 p 45

Spot Tin Prices: Are They Really on the Up and Up? Sept 14 p 89

Taking Out an Insurance Policy for Bauxite Famine? July 6 p 53

Third Quarter for Copper—The Bears Take Over, Nov 2 p 67

This Means War—Legal War—Between Kennecott and Chile, Oct 12 p 69

Up the Down Stairs Again for Lead and Brass Prices, Sept 7 p 90

What's So Rare About a Rare-Earth Story? Aug 10 p 40

World Copper Stocks Up; But Whither Go Prices? Oct 5 p 123

Bennett, K. W.

Aerial Photo Lens Zooming in on Earthly Markets, Aug 31 p 23

At the Casters, When it Rains Orders it Pours, Nov 30 p 39

Bargain Plant Leases Disappear, July 13 p 66

Caution Light Slows RR Recovery, Aug 3 p 58

Chemical Milling Grabs New Lease on Life, Oct 12 p 41

Computer-Memory Technology Takes a Bigger Byte, Aug 10 p 43

Contract Jobs: Make Them Steady, Profitable, Sept 28 p 43

Deere to Break Bottlenecks with More Bucks, Aug 24 p 68

Diecasting Equipment Orders Begin to Boom, Oct 26 p 37

Ecology's Latest Sacrifice: Burned No. 2 Bundles? Aug 31 p 28

Elephant Tools Fire Machine Tool Climate, Oct 26 p 36

Factory Profit Levels: Easy to Gage and Improve, Oct 26 p 42

Farm Equipment: The Lush Years Return, July 27 p 44

Farm Machinery Set to Reap a Big '73, Nov 16 p 58

Foreign Fluid Power Powers Up, Nov 23 p 66

Furnace Economics Expand Mini-Mills, Dec 14 p 50

Here Comes the Old Money Game—and U.S. Dollar is 'It', Dec 7 p 72

It Takes Billions to Catch a Thief, Aug 17 p 38

Job Tests: A Testy Question About Validity, Sept 28 p 41

Lamebrain Hiring Thwarts Handicapped, July 20 p 36

Little Planes Lift Aero Market, Aug 31 p 25

MT Show: The Global Scent of Fresh Sales Blood, Sept 14 p 49

Machining's Exotic Sleeper Comes on Strong, Sept 7 p 87

Metals Builders Build a Boom, Aug 24 p 65

Mexico's Growth—Building Solidly, But Fast, Nov 23 p 69

Mobile Homes: Tomorrow's Recession-Proof Market? July 6 p 25

Pollution Control: It's Now a Package Deal, Nov 9 p 60

Productivity Gains—and OSHA—Spur Diecasting, Oct 26 p 37

Public Image of Business Continues to Sag, Nov 9 p 52

Race to Stifle SO_2 Offers $10 Billion Purse, Oct 19 p 80

Recovery, Overseas Lift Crane Orders, Oct 26 p 39

Synthetic Gas: It's a Natural, Aug 10 p 42

Tool Show's Second Week Draws Fat Wallets, Sept 21 p 47

Will Success Spoil Inflation Controls? Dec 21 p 42

Zinc-Rich Coatings Enroute for Auto, Appliance Use, Oct 12 p 42

Black, I. G.

Barter Surfaces as International Trade Tool, Nov 2 p 39

Japan Renews Push into U.S. Plants, Hitachi is Latest, Sept 28 p 39

Product Liability: Industry's Newest Tax? Aug 31 p 23

C

Cathey, P. J.

Do Your Thing—but Organize to Do it Well, Aug 17 p 41

Let Cost-Cutters Monitor Designers' Dreams, Aug 31 p 30

Productivity: Can 'New Carrot' be an Old One—Money? Sept 21 p 51

Success in R&D Without Deficit Spending, Nov 30 p 43

Yes, You Can Price Steel Orders by Computer, Dec 14 p 56

D

DuMond, T. C.

Burning Wastes Test Mettle of Materials, Aug 10 p 52

Copper Alloy Gives a Damp, Nov 9 p 68

Future Gleams for Copper Die Castings, Dec 21 p 50

Metals Volley for Top Tennis Seeding, Aug 31 p 32

Parts "Born-to-Shape" for Economy, Oct 5 p 79

Vacuum Draws Down Carburizing Time, Sept 7 p 100

G

Greene, A. M.

Advanced Ceramics Solve Special Problems, Nov 9 p 70

Computer Hierarchy Governs Dutch Steel, July 27 p 56

Data Networks are a Vital Link for Industry, Sept 21 p 53

Tempering Furnace Sets Pipe Properties, Nov 30 p 55

Guiles, R. A.

Aluminum in Autos: Sometimes You Add by Cutting-Weight, Nov 2 p 23

And Then There were Three—Bus Builders, That Is, Nov 23 p 27

Attack on GM 'Monopoly' Escalates, Nov 16 p 59

Auto Emissions: Are Converters Coming for '75? Oct 5 p 68

Automakers Boost Fourth Quarter Output as Sales Jump, Oct 19 p 25

Automakers' New Sales Road—Rec Vehicles, Sept 28 p 42

Borg-Warner's New Transmissions Shot from Guns, Sept 7 p 25

Can Detroit's Wand Turn Federal Safety Beast into a Beauty? Nov 9 p 27

Detroit Escalates Weight War: Plastic Seems to Be Main Weapon, Oct 26 p 21

Detroit's Auto-Parts Diet Struggles, Oct 19 p 79

Emissions: Well, Somebody Thinks They've an Answer, Oct 12 p 27

Federal Auto Repair Centers are Planned, Oct 19 p 25

Future Trucks Will Not Automatically be Stick-Shifts, Oct 5 p 23

Grease Monkey: Auto Jungle's Dying Species, Sept 28 p 22

Great Lakes Shipping: Damn the Ice, Full Speed Ahead, Dec 14 p 53

Highway Safety: Where are You Now that We Need You? Nov 30 p 20

Monotony: Labor's Liveliest Issue in '73? Dec 7 p 77

Motivation: What You Want is What You Get, Nov 2 p 46

Move Over, Santa, '72s Got its Own Bag of Goodies, Nov 23 p 64

Multinationalism: Industry and Labor Go Begging, Nov 2 p 19

Multi-Plant Firms Have Bigger OSHA Headaches, Oct 12 p 45

New Bumpers Bounce Back, Come on Strong, Sept 21 p 23

New GM Game: Let's Play I've Got a Secret? Dec 21 p 39

Now, At this Inconvenient Time—Strikes Hit GM, Nov 2 p 40

OSHA May Certify Private Labs to OK Equipment, Sept 21 p 25

Round Two: Safety Rules Coming for Recreational Vehicles, Sept 14 p 55

Safety Bumps Up High-Strength Steel Stock, Nov 16 p 20

TRW: Trying to Plug Aerospace Know-How into Detroit Iron, Dec 21 p 22

Truck Sales Keep on 'Truckin', Dec 21 p 38

Turbine Trucks: Gimmick or Godsend? Dec 14 p 52

Wankel on the Way, But Good Ol' V-8 Isn't Doomed Yet, Dec 14 p 21

What Ya Gonna Do When the (Oil) Well Runs Dry? Nov 16 p 23

Who Pays for Recall Defect Repair? VW Case May Decide, Dec 7 p 25

The Yen Looks to Value—Up—and Japan's Not Happy, Dec 7 p 72

You're Hired, but First this Little Test? Oct 5 p 70

I

Irving, R. R.

Dry Compound Boosts Efficiency of Fuel Gases, Nov 2 p 54

Fracture Toughness is No Accident, Oct 19 p 91

Magnesium: There's Action in Them Thar Hills, Nov 9 p 64

Norway Builds the Pressure-Vessel Tanker, Aug 17 p 46

Plate Steels Score Breakthrough in Quality, Oct 12 p 50

Vertical Welding Goes into Orbit, Oct 26 p 50

Will Industry Demand ESR Quality in Carbon Steels? Aug 3 p 69

K

Kaufman, K. A.

Are Controls Heading U. S. into New Inflation? Dec 21 p 21

Can it Be—A New Outlook in Ways and Means Committee? Nov 30 p 19

China Trade: From Panda Pets to U. S. Jets? July 13 p 27

Cohen Strongly Defends ADR, 7 Pct Tax Credit, Oct 5 p 21

Computer Patent Battle Goes from Court to Congress, Nov 30 p 45

Congress or No—President Will Cut Federal Spending, Oct 26 p 19

Congress Sends Tough Clean-Stream Measure to Nixon, Oct 12 p 25

Control Blitz Keys on Prices, Not Wages, Aug 24 p 67

Controls Working but Burns Urges More, Aug 10 p 41

Controversial 'Buy American' Clause Splits House of Steel, Oct 5 p 69

Copper's Price for Cleaner Smelters: A Cool Half Billion, Aug 3 p 85

Defense Budget Cuts Could Torpedo Some in Metalworking, Sept 21 p 21

Digging Deeper Into Strip Mining Bills, July 13 p 27

The Energy Outlook: Better Late than Never? Dec 21 p 21

Fight Over Boxcars Keeps on Rollin' Along, Aug 17 p 21

House Cool to Embargo on Rhodesian Chrome, Aug 24 p 23

Justice Wants Suit Against Steel Quotas Put on Scrap Heap, Sept 14 p 25

Loans: Cheap Money Costs More, Sept 7 p 85

McGovern Economics: Did He Make Any Bulls out of Bears? Sept 7 p 89

McGovern for President? No Thanks, Executives, July 6 p 16

McGovern Mellowing Tough Stand on Business Laws, July 27 p 21

McGovern Woos Labor Support With Rigged Base-Wage Voting, July 27 p 43

Metric Conversion: Inching Closer Toward Reality? Aug 17 p 21

1973: Every Day We'll Get Bigger and Better in Every Way, Nov 9 p 25

'73 May Boom, But Continued Controls are Almost Certain, Nov 23 p 65

Nixocrats Nix Interest Controls for Present, Nov 2 p 21

Nixon and Congress: Four-Year Money Fight? Nov 16 p 55

Nixon Doesn't Have a Strike Against Him in '72, Aug 3 p 25

Nixon Puts the Axe to Federal Spending, Oct 19 p 23

Nixon's Cabinet: New Faces and Musical Chairs, Dec 14 p 19

OHSA: No Pay for Small Fry? Aug 17 p 37

Pension Bill Tide Hits High Wager-Mark in Congress, Sept 28 p 37

Picket Line Support No Cause to Fire, High Court Says, Nov 16 p 19

Politics: Strange Bedfellows Mate, July 20 p 33

Post-Election Letdown May Include Phase III Blahs, Nov 9 p 57

Public Hostile to Any Tax Hike, Congress Warned, Aug 3 p 25

'Regional' Foreign Dumping Will Be One Target of New Bill, Nov 23 p 25

Russians are Coming this Fall to Talk About Trade Pact! Aug 24 p 23

Scrap, Ecologists Get ICC to Delay Scrap Freight Hike, Nov 16 p 19

Senate Passes Bill to Trim Restricted Export List, Aug 10 p 23

Sometime, After the Politics, there Will be a Tax Increase, July 6 p 16

Thought Dead, Buy American Specialty Steel Bill Lives, Oct 19 p 81

Treasury Asks for Power to Stem Cargo Thievery, Aug 10 p 23

U. S. Industries Facing a New 'Hart' Brake? Aug 3 p 57

U. S. International Money Proposals Get Foreign Nod, Oct 5 p 21

U. S.-Soviet Trade Talks are Getting Down to the Basics, July 20 p 19

VIP Soviet Trade Bait Draws Early Bites, Oct 26 p 34

Value-Added Tax: Trial Balloons Develop Leaks, Sept 28 p 21

What's All this Talk About U. S.-China Trade Boom? Oct 19 p 23

White House Sees Chance for Budget Lid, Sept 7 p 23

Mc

McManus, G. J.

Appliances: Steel Tries to Brake Plastics Trend, Aug 10 p 39

Are Price Controls Out of Concontrol? Dec 14 p 48

Automakers Bank on Blanks to Cut Scrapage, Aug 24 p 71

Brazil's Billion-Dollar Steel Baby, Nov 2 p 44

Building Material Prices: New Ball Game, Nov 23 p 67

Changing the Almighty Dollar, Oct 26 p 34

Construction Wages are Under Control? Oct 12 p 46

Continuous Cold Rolling is Now One Step Closer, Sept 21 p 60

Continuous Steelmaking Turns a Corner, July 20 p 51

Customer Grumblings Crowd Mills into Steel Scrap Changes, Nov 16 p 60

Disston: The Abandoned Baby Gets Fat, Sept 14 p 54

Don't Get Defensive in an Order Downturn, Oct 5 p 74

EPA vs Mills: Costs are in Eye of Beholder, Oct 12 p 43

Ecological Hangups Erode Heavy Steel's Market, Aug 17 p 34

The Fickle Future of Pickle Liquor? Oct 19 p 83

Foreign Inflation: U. S.'s New Trade Ally? Aug 3 p 59

Furnace Economics Expand Mini-Mills, Dec 14 p 50

Holding Companies are Losing their Grip, Aug 3 p 56

Industry and Agnes: Only the Ark Was Missing, July 6 p 29

Laclede Rollback: Pricing's Guinea Pig? July 27 p 47

Lower the Barriers at Home and Abroad, July 13 p 72

Management is Really Going Mod, July 20 p 39

Manufacturers Up Output with Less Workers, Sept 14 p 52

The Midi-Mill: It's a Different Ball Game, Sept 7 p 95

NAR, Rockwell Mfg.—W. F. Rockwell Merges with Himself, Nov 9 p 55

Need a Plant? Better Get Going, Oct 5 p 72

New Entries Enrich Coalgas Interest, July 6 p 28

Nixon Has 'Positive Enthusiasm', Steel Leaders Believe, Nov 16 p 57

Pipeline Charging for Coke May Get Push from U. S. Steel, July 13 p 67

Politics: Strange Bed'ellows Mate, July 20 p 33

Price Relief—Can Steel Dent Commission's Wall? Aug 24 p 67

Shutdowns: One Company's Loss is Another's Gain, Nov 23 p 61

Slab Casters Turn it On at McLouth Steel, Nov 30 p 51

Steel Earnings: The Only Way to Go is Up, Aug 3 p 55

Steel Hikes to Be Scattered Throughout '73, Sept 21 p 45

Steel Mills Get Out from Beneath Electrical Sheets, July 6 p 30

Steel Output Boost Mostly a Bust? Dec 21 p 40

Steel Slices Gripe Time to a Nub, Aug 17 p 40

Steelmakers Pin Hopes on Formed Coke, Nov 2 p 52

U. S. Comes in Ninth on Inflation, July 13 p 63

U. S. Steel Shocks Industry with Price Hike, Nov 23 p 63

USS Coke Ovens: Steel's Reluctant Leader, Oct 5 p 67

USS Keeps it 'All in the Family', Dec 7 p 67

USWA: Politics Upstages Issues, Sept 28 p 40

VIP Soviet Trade Bait Draws Early Bites, Oct 26 p 34

What's Behind Freeze on Stainless Prices? Sept 21 p 45

Who—If Anyone—Will Pay New Nickel Price? Sept 14 p 53

Why Not Try a Profit Increase Instead of a Price Increase? Aug 17 p 37

Will Pipe Hit Gusher from Renewed Oil-Field Activity? Sept 21 p 48

Windfall Drops Changes in Stainless Lap, July 20 p 35

M

Mullins, P. J.

Russian ESR Goes on Stream in Sweden, Dec 7 p 87

Steam Replaces Argon in Swedish Stainless Process, Nov 9 p 71

N

Neal, H. R.

Nixon Has 'Positive Enthusiasm', Steel Leaders Believe, Nov 16 p 57

O

Obrzut, J. J.

Breathe Easier with Antimist Cutting Oil, July 27 p 58
Bumpers Reflect Bright '73 for Platers, Dec 14 p 68
Compact Burner Churns Out Heat Fast, Nov 23 p 91
Fluxless Aluminum Soldering Heads for Production Line, Dec 21 p 55
LNG Tanks Gain Big Margin of Safety from Wire Girdle, Aug 17 p 48
Metric System Millimetres its Way to Adoption, July 13 p 72
Powder Coating: 'A Finisher's Finish', Nov 16 p 67
Seashore Test Lot Has no Mercy on Metals, Oct 19 p 94
Vibration Couldn't Shake this Bolt Loose, Sept 21 p 59
Water-Table Traps Fumes and Noise in Torch Cutting, Sept 14 p 67

P

Patton, W. G.

Detroit Finds New Economies in Gearmaking, Sept 21 p 55
EDM Puts Precision Holes in Hard Metals, Nov 30 p 56
Forging Line Geared to High Production, July 20 p 54
Gearmakers Watch the New Developments, Sept 14 p 61
New Process Plates Composite Coating on Auto Parts, Aug 17 p 50
PM Parts Production Finally Hits the Big Time, Sept 7 p 86

S

Sandford, J. E.

Automation: Spreading Technology Too Thin? Dec 7 p 69
Computer's Cousins Make New Moves, Sept 21 p 49
DNC Lines Link Cutting to New Future, Oct 26 p 46
The Future Shock in Manufacturing, Aug 24 p 75
Lathes Skirmish in Low-Cost Market, Sept 28 p 38
Low-Cost Lathe Fits Heavyweight Image, July 13 p 86
Packaging Adds Cost Appeal to NC, July 20 p 52
The Precision Edge of Abrasive Cutting, Dec 14 p 62
Small Builder Rides the 'Edge of Accuracy', July 27 p 60
Stresskin Lightens the Supersonic Load, July 6 p 45

Shah, Raymond

Electron Beams Broaden their Metalworking Use, Sept 28 p 47
Thin-Wall Castings Offer Hairline Accuracy, Oct 5 p 84

Suchocki, C. J.

Bodine Gets On Line with In-Line Assembly, Oct 26 p 38
Exporter Memo: Dump Before the Phantom Strikes, July 13 p 31
GE Thinks it Has Found Rich, Untapped Market, Oct 19 p 82
IUE: More than a Concern Over 'Dumping Nixon', July 6 p 15
Meany, McGovern and the Time for Decision, July 20 p 17
Nuclear Safety: The Only Fallout is $40 Million, July 27 p 25
Pollution Tax: A Matter of Market Control, Aug 10 p 27
RRs vs Recyclers: SCRAP for Scrap's Sake, July 27 p 25
UMW Election: A Good Chance for Reform, Dec 21 p 19

W

Wakefield, B. D.

An Answer to 'How Tight is Tight?' July 13 p 82
Automatic Welding: Try It, You'll Like It, Dec 14 p 66
Cast-to-Shape Parts Require 50 Pct Less Secondary Machining, Oct 5 p 85
Common Materials Give Rankine an Edge, Sept 28 p 53
Computer Harmonizing Cuts Steel Costs, Aug 31 p 34
Custom-Cutting Creates Big Saw Market in U.S. Service Center, Oct 26 p 51
Die Casting and Solid State Controls Mix, Nov 2 p 56
Digital Machine Control Gives NC Another Dimension, Aug 10 p 58
EB, UV Markets Take Off—but Not for Metals, Oct 5 p 66
Exotic Alloys Come Back with Gas Turbines, July 6 p 40
Forging PM Preforms Leads to Part Economy, July 27 p 53
Isolators Add Precision to Presswork, Aug 31 p 36
Lasers Challenge Electron Beam Welding in Speed, Quality, Dec 7 p 88
Parts Work Harder—and Longer—if Teflon-Anodized, Oct 19 p 97
Punch Press Builders Go All the Way with NC, Nov 23 p 87
Shipyards Sink Funds into Equipment Markets, Nov 9 p 54
Soft-Wired Control Builder Sets Sight on Lathe Market, Sept 7 p 102
Stainless Bar Put to Screw Machine Test, Nov 23 p 90

Weimer, G. A.

GM's Wankel in White's Canton Plant? Nov 30 p 41
UMW Election: A Good Chance for Reform, Dec 21 p 19

Williams, D. N.

Absenteeism is AWOL at General Motors, July 20 p 38
'Do it Yourself' Russian Trade, July 6 p 27
Economic Index: Breadwinners Say it's Getting Better, July 27 p 45
Everyone Talks of Emission Testing—New Jersey Does It, July 20 p 21
GM Has a Better Idea on Emission Testing, July 6 p 20
Hey You, the Computer Says Your Bus is Here, July 6 p 20
How Much Will Auto Prices Go Up? July 13 p 65
If Auto Sales Pace Economy—We're Home Free, July 13 p 65
Industry and Agnes: Only the Ark Was Missing, July 6 p 29
Nader Blasts Away at His First Hate—the Corvair, July 27 p 23
Vega is Cinch to Win 'Recall of the Year' Award, July 13 p 29
When Wankel Puts it All Together—Watch Out, Aug 3 p 61

Wilson, R. A.

AMC Hatches a Back and a Bumper for '73, Aug 10 p 25
Bull Gear Flexing Won't Bully New Drive, Sept 7 p 101
Coated Abrasive Field Has New Nitty-Gritty, Sept 14 p 65
Delivery Stretch May Squeeze MT Builders, Nov 2 p 41
Drive Trains Warm to Cold-Forming, Aug 17 p 36
Dynamic Stiffness: A Performance Parameter, Dec 7 p 83
Extrusion Bending is a No-Scrap Operation, Aug 31 p 38
Foundries Heat Up for Demand Push, Oct 5 p 65
GM Reincarnates—in Off-Road Haulers as Terex, Aug 10 p 45
GM Trial Balloon: Will Safety Sell Cars Now? Sept 14 p 27
Getting Lathes Turning with the Super Tool, July 20 p 47
In '68—Anyone for Ferrous Diecasting? Now There Is! July 27 p 46
Large Lathes Don't Have to be Noisy, Dec 21 p 48
Machine Tools: Getting Ready for More Show (Biz), Aug 31 p 26
Metals Looks for a Home in Housing, Nov 9 p 56
Mini-Computers: DECKing the Halls with Price Cuts? July 13 p 64
NC Bar Chucker: It's an Index to Productivity, July 27 p 55
PWM: New Tiger in Cutting Tools, July 13 p 69
Plastics Will Not Steel the Show in 1973 Models, Aug 24 p 25
Programmable Controller Turns on Foundry, Oct 5 p 82
Skills Attrition Stifles T&D Shop Revival, Sept 28 p 36
Stirling Engines: A Golden Oldie, but is it Sterling? Aug 17 p 23
Super Tools for Superalloys, Oct 19 p 96
Towmotor Follows the Track of the Cat, Dec 14 p 67
U.S.-Soviet Trade: Penpals Without Any Pens? Nov 30 p 42
Wankel Machine Tools Up and Running, But Where? Aug 31 p 15
Warner & Swasey Joins Control Builders Club, Sept 7 p 88
With Profits Elusive, Republic Steel Says "Nuts" to Bolts, Nov 16 p 61
World Machine Tools: Service War? Aug 3 p 53

Iron Age
a Chilton publication
Radnor, Pennsylvania 19089

Printed in U.S.A.